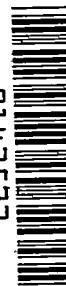


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# RESEARCH MEMORANDUM

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EFFECT OF A WING LEADING-EDGE FLAP AND CHORD-EXTENSION  
ON THE HIGH SUBSONIC CONTROL CHARACTERISTICS OF AN  
AILERON LOCATED AT TWO SPANWISE POSITIONS

By Robert F. Thompson and Robert T. Taylor

Langley Aeronautical Laboratory  
Langley Field, Va.

NATIONAL ADVISORY COMMITTEE  
FOR AERONAUTICS

WASHINGTON

May 10, 1955

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By officer *M.H.A. Teng* *Rank: Lieutenant* *119*  
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## NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

## RESEARCH MEMORANDUM

## EFFECT OF A WING LEADING-EDGE FLAP AND CHORD-EXTENSION

ON THE HIGH SUBSONIC CONTROL CHARACTERISTICS OF AN  
AILERON LOCATED AT TWO SPANWISE POSITIONS

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## SUMMARY

An investigation was made in the Langley high-speed 7- by 10-foot tunnel to determine the effects of a wing leading-edge modification on the effectiveness of a trailing-edge flap-type aileron. The control was tested on the left half of the wing of a sting-mounted wing-fuselage model having a wing of aspect ratio 4, taper ratio 0.3, 45° sweepback, and NACA 65A006 airfoil sections. The wing leading-edge modification was the optimum configuration from a previous investigation and consisted of a chord-extension over the outboard 35 percent of the semispan in combination with a full-span leading-edge flap deflected 6°. The aileron spanned 50 percent of the left half of the wing and was tested at two spanwise locations. Aileron deflections up to approximately  $\pm 30^\circ$  were tested through an angle-of-attack range which varied with Mach number and a Mach number range from 0.40 to 0.94. Complete results are presented in tabular form as increments in aerodynamic coefficients due to aileron deflection. A representative part of the data is presented graphically, and results are discussed on the basis of these data.

Modifying the wing leading edge generally had only a small effect on the static control characteristics of either the inboard or outboard aileron. The effect of aileron spanwise position was small and did not favor either location over the entire test range.

## INTRODUCTION

Detailed wind-tunnel investigations have shown that, for certain thin sweptback wings, leading-edge separation combines with a spanwise pressure gradient to create a vortex-type flow over most of the lift range. This flow can result in undesirable static longitudinal stability characteristics for certain aspect ratios and can lead to the objectionable

characteristic termed "pitch-up" which is found in many current airplane designs having thin sweptback wings. A detailed discussion of this flow phenomenon is given in reference 1: Outboard leading-edge chord-extensions have been effective in improving the longitudinal stability characteristics of wings of this type (ref. 2). In addition, appreciable improvement in the lift-drag ratio for thin sweptback wings up to a Mach number of 0.90 was obtained with a deflected leading-edge flap (refs. 3 and 4). The investigation of reference 5, therefore, was made to determine the extent to which these gains in longitudinal stability and lift-drag ratio could be combined at high subsonic speeds. For the model investigated, a leading-edge chord-extension over the outboard 35 percent of the semispan in combination with a full-span leading-edge flap deflected  $6^{\circ}$  gave best results from overall considerations of stability and performance.

The present investigation was made on the wing-fuselage model used in reference 5 to determine the effects of the optimum wing leading-edge modification obtained in reference 5 on the control characteristics of a trailing-edge flap-type aileron located at two spanwise positions. The same wing-fuselage model was used in reference 6 to determine the effects of the leading-edge modification on a spoiler-type aileron located at two spanwise positions. The wing had an aspect ratio of 4, a taper ratio of 0.3,  $45^{\circ}$  of sweepback of the quarter-chord line, and streamwise NACA 65A006 airfoil sections. Tests were made in the Langley high-speed 7- by 10-foot tunnel through a Mach number range from 0.40 to 0.94 and an approximate angle-of-attack range from  $-2^{\circ}$  to  $24^{\circ}$  at the lower speeds and  $-2^{\circ}$  to  $10^{\circ}$  at a Mach number of 0.94. Complete incremental force and moment coefficients due to aileron deflection are listed in tabular form and a representative part of the data is presented graphically.

#### SYMBOLS

The forces and moments measured on the model are presented about the wind axes which, for the conditions of these tests (zero yaw), correspond to the stability axes. The origin of the axes was in the plane of symmetry at a longitudinal position corresponding to the projection of the quarter-chord point of the wing mean aerodynamic chord (fig. 1).

All force and moment coefficients presented are based on the plan form of the basic wing without chord-extensions. The area of the chord-extensions was 3.8 percent of the basic-wing area. Incremental effects due to control deflection were produced by an aileron on only the left half of the complete wing.

$C_L$	lift coefficient, Lift/qS
$C_D$	drag coefficient, Drag/qS
$C_m$	pitching-moment coefficient, Pitching moment/qS $\bar{c}$
$C_l$	rolling-moment coefficient, Rolling moment/qS $b$
$C_n$	yawing-moment coefficient, Yawing moment/qS $b$
$C_Y$	lateral-force coefficient, Lateral force/qS
$\Delta$	prefix signifying increment of coefficient due to control deflection
$q$	free-stream dynamic pressure, $\frac{\rho V^2}{2}$ , lb/sq ft
$S$	wing area before leading-edge modification, 2.25 sq ft
$b$	wing span, 3 ft
$\bar{c}$	mean aerodynamic chord of basic wing, 0.823 ft
$c$	local wing chord of basic wing, ft
$R$	Reynolds number based on $\bar{c}$
$M$	free-stream Mach number
$V$	free-stream velocity, ft/sec
$\rho$	mass density of air, slugs/cu ft
$y_1$	spanwise distance from plane of symmetry to inboard end of control, measured perpendicular to plane of symmetry, ft
$\delta$	control deflection, positive when trailing edge is below wing-chord plane, deg
$\alpha$	angle of attack of fuselage center line and wing chord line, deg

## Subscript:

nom        nominal, used to identify the approximate angles presented graphically. (Actual angles are listed in the appropriate tables.)

## MODEL AND APPARATUS

A drawing of the wing-fuselage model is given in figure 1 and a photograph of the model mounted in the tunnel is shown as figure 2. Ordinates of the fuselage are given in table 1.

The wing had  $45^{\circ}$  sweepback referred to the quarter-chord line, an aspect ratio of 4.0, a taper ratio of 0.3, and NACA 65A006 airfoil sections parallel to the plane of symmetry. The wing was made of solid aluminum alloy and the stiffness was reduced in order to provide for the leading-edge modification and the controls.

Provision for the wing leading-edge modification was made by cutting the wing along the 20-percent chord line, and leading-edge flap angles of  $0^{\circ}$  and  $6^{\circ}$  were obtained with preset steel inserts. After setting a desired flap angle, the groove in the wing was filled and finished flush to the wing surface. The chord-extension was made by using a larger insert to extend the nose section forward 0.10 $c$ . The two segments of the airfoil (nose and trailing-edge sections) were joined by a smooth fairing. Angular distortion of the leading-edge flap and chord-extension under load was checked analytically and found to be negligible.

Provision for the trailing-edge flap-type ailerons was made by cutting the wing along the 70-percent chord line and preset steel inserts were used to attach the ailerons to the wing at the desired control deflections. The groove in the wing was then filled and finished flush to the wing surface to simulate the control configuration that would be obtained with a sealed, radius-nose aileron. The controls spanned 50 percent of the wing semispan and were tested on the left wing at spanwise stations of  $\frac{y_i}{b/2} = 0.25$  and 0.50. Forces and moments were measured by a six-component strain-gage balance located within the model fuselage.

## CORRECTIONS

Blockage corrections were determined by the method of reference 7 and were applied to the Mach numbers and dynamic pressures. Jet-boundary

corrections, applied to the angle of attack and drag, were calculated by the method of reference 8. The angle of attack has been corrected for deflection of the sting-support system under load. The basic-model data (fig. 4) were obtained from reference 5 and therefore have the corrections of reference 5 applied.

Aileron deflections were measured in the wind-off condition and were believed to be little affected by aerodynamic load.

#### TESTS

The sting-supported wing-fuselage model was tested in the Langley high-speed 7- by 10-foot tunnel. Data were obtained for each model configuration by setting the tunnel Mach number and then rotating the model through an angle-of-attack range. Tests were made through a Mach number range from 0.40 to 0.94. The approximate angle-of-attack range varied from  $-2^{\circ}$  to  $24^{\circ}$  at the lower test speeds and from  $-2^{\circ}$  to  $10^{\circ}$  at  $M = 0.94$ . The angle of attack at the higher Mach numbers was limited by tunnel choking conditions. The ailerons were tested through a deflection range of about  $\pm 30^{\circ}$ .

The variation of average test Reynolds number based on the wing mean aerodynamic chord with Mach number is given in figure 3.

#### PRESENTATION OF DATA

Incremental aerodynamic coefficients due to aileron deflection for the complete investigation are presented in tabular form as follows:

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Table*	Spanwise location of control, $\frac{y_1}{b/2}$	M	$\delta$	$\alpha$
2	0.25	0.40	Range	Range
3		.60		
4		.70		
5		.81		
6		.85		
7		.90		
8		.94	Range	Range
9	0.50	.40		
10		.60		
11		.70		
12		.81		
13		.85		
14		.90		
15		.94		

\*Parts (a) of the tables present data for the plain wing and parts (b) for the wing with the modified leading edge.

Lift, drag, and pitching-moment characteristics of the model with the aileron undeflected are presented in figure 4. These data were obtained from reference 5 and are presented without discussion to show the model characteristics with and without leading-edge modification.

A representative part of the test data is plotted in figures 5 to 10 to present graphically the general results of the investigation. The effect of modifying the wing leading edge on the aileron characteristics is presented in figures 5 to 8. Figures 9 and 10 present the effect of spanwise location on the aerodynamic effectiveness of the ailerons on the wing with the modified leading edge.

The values given for angle of attack  $\alpha_{nom}$  in figures 5, 6, and 9 are nominal values of the angles of attack at which the test points were obtained. The absolute magnitude in angle-of-attack difference between any two corresponding test points is small, as shown in the tables, and results from the jet-boundary and sting-deflection corrections.

#### RESULTS AND DISCUSSION

Results of this investigation are discussed on the basis of data presented graphically in figures 5 to 10. These data were arbitrarily chosen as being representative. It should be emphasized, however, that complete results are presented in tables 2 to 15.

Effect of Wing Leading-Edge Modification on the Variation  
of Aileron Characteristics With Aileron Deflection

The effect of modifying the wing leading edge on the variation of incremental aerodynamic coefficients with aileron deflection is given for the two spanwise control positions in figures 5 and 6. In general, throughout the test range, modifying the wing leading edge had only a small effect on the incremental aerodynamic coefficient produced by control deflection of either the inboard or outboard aileron and the largest effect was on the incremental pitching-moment coefficient due to deflection of the outboard control at the lower test speeds (fig. 6(e)). These results at high subsonic speeds are in general agreement with results obtained in similar investigations at low speed in reference 9 and at supersonic speeds in reference 10 wherein the leading-edge modification included only a chord-extension.

Effect of Wing Leading-Edge Modification on the Variation  
of the Aileron Characteristics With Angle of Attack

The effect of modifying the wing leading edge on the variation of incremental rolling- and yawing-moment coefficients produced by maximum test aileron deflections with angle of attack is presented for the two spanwise control positions at  $M = 0.85$  in figures 7 and 8. Modifying the wing leading edge did not change the general variation of  $\Delta C_l$  and  $\Delta C_n$  with angle of attack and had only a small effect on the absolute magnitudes although there was a tendency to decrease the static roll effectiveness of the down-going aileron at the higher test angle of attack, especially for the inboard control.

Effect of Spanwise Position on the Variation of Aileron  
Characteristics With Aileron Deflection

The effect of aileron spanwise position on the variation of  $\Delta C_l$ ,  $\Delta C_n$ , and  $\Delta C_m$  with aileron deflection on the wing with the modified leading edge is shown in figure 9. In general, the effect of spanwise position was small and did not favor either the inboard or outboard location over the whole test range.

Effect of Spanwise Position on the Variation of  
Control Characteristics With Angle of Attack

The effect of aileron spanwise position on the variation of  $\Delta C_l$  and  $\Delta C_n$  produced by maximum test control deflections with angle of attack is presented in figure 10 at  $M = 0.85$  for the wing with the modified leading edge. The general variation of  $\Delta C_l$  and  $\Delta C_n$  with angle of attack was unaffected by aileron spanwise location. Based on total maximum positive and negative control deflection, the inboard aileron gave slightly higher values of static roll effectiveness up to an angle of attack of about  $12^\circ$  with the outboard control becoming slightly more effective at the higher angles primarily because of the increase in effectiveness of the outboard aileron for positive deflections.

CONCLUSIONS

A wind-tunnel investigation of a wing-fuselage model was made through an angle-of-attack range to a Mach number of 0.94. The purpose was to determine the effects of a wing leading-edge modification on the incremental aerodynamic coefficients due to deflection of a trailing-edge flap-type aileron located at two spanwise positions. Results indicate the following conclusions:

1. Modifying the wing leading edge generally had only a small effect on the static control characteristics of either the inboard or outboard aileron.
2. In general, the effect of aileron spanwise position was small and did not favor either the inboard or outboard location over the entire test range.

Langley Aeronautical Laboratory,  
National Advisory Committee for Aeronautics,  
Langley Field, Va., February 2, 1955.

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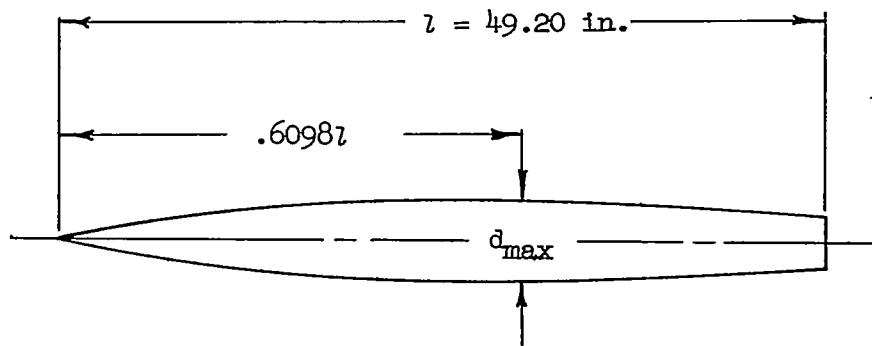
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TABLE 1.- FUSELAGE ORDINATES

Basic fineness ratio 12, actual fineness ratio 9.8  
achieved by cutting off rear portion of body

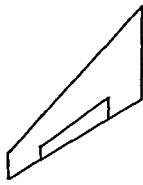


Ordinates, percent length	
Station	Radius
0	0
.61	.28
.91	.36
1.52	.52
3.05	.88
6.10	1.47
9.15	1.97
12.20	2.40
18.29	3.16
24.39	3.77
30.49	4.23
36.59	4.56
42.68	4.80
48.78	4.95
54.88	5.05
60.98	5.08
67.07	5.04
73.17	4.91
79.27	4.69
85.37	4.34
91.46	3.81
100.00	3.35

Leading-edge radius = 0.0006l

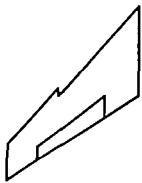
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TABLE 2.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{y_1}{b/2} = 0.25$ ;  $H = 0.40$ 

## (a) Plain leading edge

$\alpha$ deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$	$\alpha$ deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$					
$b = 6.7$												$b = -5.1$						
-2.05	.0020	.0021	-.0170	.0107	-.0002	.0023	-2.05	-.0253	.0018	.0246	-.0091	-.0003	-.0001					
.01	.0017	.0017	-.0220	.0106	-.0005	.0048	-.01	-.0474	.0008	.0199	-.0092	-.0003	.0010					
2.07	.0393	.0029	-.0191	.0107	-.0009	.0050	2.04	-.0318	-.0004	.0195	-.0091	-.0002	.0023					
4.12	.0348	.0032	-.0216	.0104	-.0014	.0047	4.10	-.0206	.0015	.0194	-.0094	-.0002	.0024					
6.18	.0165	.0024	-.0194	.0102	-.0019	.0046	6.16	-.0330	-.0041	.0203	-.0088	-.0009	.0015					
8.24	.0165	.0035	-.0145	.0098	-.0018	.0048	8.23	-.0268	-.0041	.0170	-.0057	-.0020	.0024					
10.30	.0254	.0076	-.0088	.0068	-.0020	.0054	10.29	-.0110	-.0023	.0175	-.0060	-.0016	-.0003					
12.34	.0254	.0081	-.0103	.0061	-.0025	.0055	12.34	.0043	-.0009	.0181	-.0066	-.0020	.0024					
14.39	-.0064	.0018	-.0078	.0050	-.0025	.0073	14.39	-.0121	-.0051	.0161	-.0050	-.0018	.0023					
16.42	.0025	.0043	-.0056	.0047	-.0026	.0086	16.43	-.0018	-.0029	.0163	-.0040	-.0019	.0025					
18.46	-.0197	-.0034	-.0060	.0037	-.0025	.0071	18.46	-.0323	-.0132	.0131	-.0040	-.0022	-.0001					
20.47	-.0247	-.0037	-.0071	.0031	-.0026	.0070	20.47	-.0563	-.0266	.0071	-.0022	-.0014	-.0002					
23.48	.0246	-.0045	-.0022	.0028	-.0024	.0033	23.48	-.0189	-.0120	.0154	-.0007	-.0003	-.0040					
$b = 12.0$																		
-2.01	.0970	.0010	-.0339	.0191	-.0007	.0046	-2.06	-.0596	.0047	.0372	-.0187	-.0011	.0035					
.04	.0974	.0032	-.0339	.0192	-.0014	.0058	-.03	-.0911	.0032	.0339	-.0188	-.0006	.0071					
2.10	.1114	.0058	-.0328	.0188	-.0020	.0045	2.03	-.0751	.0008	.0342	-.0184	-.0002	.0085					
4.16	.1210	.0095	-.0335	.0181	-.0029	.0042	4.09	-.0685	-.0011	.0329	-.0188	-.0004	.0086					
6.21	.1077	.0130	-.0282	.0179	-.0038	.0039	6.16	-.0665	-.0042	.0314	-.0175	-.0013	.0091					
8.27	.1118	.0193	-.0215	.0162	-.0037	.0050	8.22	-.0646	-.0075	.0277	-.0136	-.0029	.0090					
10.33	.1019	.0228	-.0102	.0095	-.0040	.0040	10.28	-.0488	-.0071	.0232	-.0131	-.0029	.0053					
12.37	.0969	.0259	-.0112	.0093	-.0047	.0050	12.33	-.0241	-.0054	.0224	-.0123	-.0036	.0084					
14.42	.0738	.0245	-.0087	.0084	-.0051	.0059	14.38	-.0354	-.0106	.0213	-.0109	-.0039	.0085					
16.45	.0728	.0281	-.0072	.0078	-.0054	.0070	18.45	-.0461	-.0187	.0156	-.0092	-.0051	.0084					
18.50	.0492	.0233	-.0070	.0054	-.0048	.0055	20.46	-.0447	-.0203	.0075	-.0060	-.0047	.0056					
20.48	.0124	.0148	-.0113	.0053	-.0053	.0052	23.49	-.0012	-.0286	.0183	-.0030	-.0026	.0016					
23.51	.0329	.0236	-.0018	.0034	-.0038	.0031	$b = -10.5$											
$b = 16.0$																		
-2.02	.1080	.0035	-.0467	.0259	-.0013	.0051	-2.05	-.0924	.0083	.0555	-.0246	-.0020	.0048					
.04	.1081	.0042	-.0495	.0258	-.0021	.0088	-.02	-.1192	.0068	.0554	-.0257	-.0013	.0071					
2.09	.1361	.0073	-.0474	.0249	-.0026	.0077	2.04	-.0887	.0040	.0560	-.0256	-.0009	.0084					
4.15	.1228	.0109	-.0492	.0247	-.0040	.0071	4.10	-.0912	.0008	.0563	-.0260	-.0001	.0110					
6.23	.1235	.0161	-.0436	.0235	-.0052	.0092	6.15	-.0991	-.0049	.0554	-.0256	-.0018	.0118					
8.27	.1224	.0218	-.0351	.0203	-.0046	.0118	8.21	-.0874	-.0077	.0488	-.0211	-.0033	.0104					
10.32	.0890	.0228	-.0220	.0118	-.0049	.0091	10.27	-.0575	-.0062	.0419	-.0186	-.0037	.0073					
12.37	.0889	.0264	-.0219	.0108	-.0057	.0112	12.33	-.0323	-.0058	.0396	-.0177	-.0045	.0090					
14.40	.0523	.0214	-.0191	.0097	-.0061	.0119	14.38	-.0529	-.0136	.0380	-.0154	-.0052	.0081					
16.43	.0381	.0204	-.0172	.0090	-.0063	.0129	16.42	-.0331	-.0112	.0354	-.0135	-.0058	.0073					
18.49	.0505	.0270	-.0140	.0068	-.0061	.0116	18.45	-.0405	-.0161	.0318	-.0129	-.0066	.0038					
20.48	.0135	.0193	-.0234	.0067	-.0071	.0124	20.46	-.0442	-.0188	.0211	-.0091	-.0068	.0046					
23.49	-.0011	.0118	-.0147	.0038	-.0044	.0117	23.49	-.0382	-.0229	.0330	-.0049	-.0044	.0005					
$b = 30.6$																		
.06	.2041	.0242	-.0889	.0437	-.0075	.0213	-2.10	-.1895	.0262	.0844	-.0426	-.0073	.0135					
2.12	.2275	.0281	-.0858	.0450	-.0090	.0224	-.04	-.2119	.0227	.0853	-.0450	-.0064	.0143					
4.17	.2322	.0369	-.0854	.0419	-.0109	.0230	2.00	-.2057	.0178	.0921	-.0480	-.0056	.0137					
6.23	.2131	.0438	-.0777	.0377	-.0125	.0247	4.05	-.2085	.0109	.0924	-.0480	-.0041	.0165					
8.30	.1779	.0457	-.0611	.0304	-.0111	.0257	6.11	-.2076	.0015	.0922	-.0480	-.0010	.0177					
10.33	.1303	.0478	-.0426	.0213	-.0121	.0213	8.18	-.1920	.0066	.0831	-.0434	-.0020	.0157					
12.34	.0458	.0336	-.0398	.0152	-.0118	.0254	10.24	-.1625	.0116	.0704	-.0376	-.0041	.0124					
14.42	.0913	.0513	-.0326	.0143	-.0133	.0274	12.28	-.1420	.0176	.0621	-.0351	-.0058	.0108					
16.44	.0759	.0509	-.0307	.0125	-.0133	.0284	14.35	-.1527	.0284	.0612	-.0318	-.0073	.0078					
18.4.	.0378	.0429	-.0315	.0099	-.0128	.0269	16.38	-.1414	.0341	.0535	-.0286	-.0086	.0074					
20.50	.0170	.0395	-.0201	.0097	-.0143	.0275	18.42	-.1248	.0379	.0461	-.0249	-.0097	.0034					
23.50	.0432	.0530	-.0246	.0074	-.0141	.0276	20.43	-.1354	.0505	.0353	-.0184	-.0102	-.0008					
							23.44	-.1430	.0654	.0418	-.0133	-.0104	-.0053					

TABLE 2.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{V_1}{V_2} = 0.25$ ;  $K = 0.50$  - Concluded

## (b) Modified leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 6.7$							$\delta = -5.1$						
- 2.03	.0580	-.0013	-.0149	.0100	+.0003	.0028	- 2.05	-.0391	.0035	.0221	-.0099	-.0003	-.0040
.03	.0532	.0004	-.0182	.0097	-.0002	.0013	- .02	-.0459	.0009	.0239	-.0118	-.0060	-.0081
2.08	.0630	.0023	-.0175	.0101	-.0005	.0014	2.04	-.0476	-.0002	.0256	-.0112	.0003	-.0080
4.14	.0584	.0038	-.0171	.0103	-.0009	.0001	4.10	-.0471	-.0007	.0249	-.0113	.0007	-.0079
6.20	.0587	.0048	-.0171	.0102	-.0012	-.0000	6.17	-.0463	-.0016	.0262	-.0116	.0011	-.0066
8.25	.0654	.0088	-.0146	.0094	-.0018	.0009	8.23	-.0316	-.0025	.0245	-.0112	.0015	-.0064
10.31	.0448	.0083	-.0111	.0085	-.0022	.0007	10.29	-.0212	-.0024	.0287	-.0107	.0022	-.0060
12.35	.0541	.0111	-.0104	.0073	-.0024	.0017	12.34	-.0068	-.0010	.0240	-.0098	.0025	-.0058
14.39	.0302	.0099	-.0065	.0052	-.0023	-.0000	14.38	-.0290	-.0066	.0256	-.0077	.0028	-.0069
16.43	.0298	.0114	-.0080	.0049	-.0025	.0025	16.41	-.0373	-.0103	.0222	-.0073	.0028	-.0069
18.48	.0469	.0195	-.0058	.0034	-.0023	.0024	18.45	-.0180	-.0069	.0215	-.0059	.0027	-.0079
20.48	.0097	.0106	-.0015	.0003	-.0017	.0019	20.49	-.0051	-.0010	.0133	-.0046	.0025	-.0076
23.51	.0088	.0103	-.0058	.0012	-.0011	.0165	23.51	-.0035	-.0039	.0149	-.0026	.0025	-.0098
$\delta = 12.0$							$\delta = -10.5$						
- 2.00	.1159	-.0006	-.0355	.0191	-.0002	.0065	- 2.06	-.0864	.0070	.0400	-.0192	-.0019	-.0024
.04	.1015	.0023	-.0402	.0188	-.0009	.0041	- .03	-.0916	.0043	.0418	-.0218	-.0009	-.0002
2.09	.1016	.0051	-.0403	.0191	-.0015	.0041	2.05	-.0813	.0016	.0417	-.0217	-.0002	-.0005
4.15	.0967	.0078	-.0392	.0185	-.0020	.0055	4.09	-.0944	-.0000	.0413	-.0213	.0002	-.0005
6.21	.0876	.0090	-.0385	.0180	-.0027	.0058	6.14	-.0935	-.0034	.0405	-.0214	.0010	-.0006
8.26	.1062	.0157	-.0349	.0166	-.0036	.0050	8.22	-.0692	-.0053	.0395	-.0216	.0021	-.0022
10.32	.0735	.0146	-.0275	.0148	-.0041	.0041	10.27	-.0816	-.0114	.0397	-.0192	.0029	-.0015
12.34	.0655	.0173	-.0247	.0110	-.0046	.0024	12.31	-.0622	-.0116	.0339	-.0179	.0036	-.0019
14.38	.0210	.0119	-.0187	.0082	-.0044	.0030	14.37	-.0747	-.0181	.0328	-.0144	.0045	-.0001
16.43	.0295	.0161	-.0187	.0068	-.0046	-.0007	16.41	-.0457	-.0134	.0300	-.0123	.0046	-.0007
18.45	.0101	.0132	-.0173	.0048	-.0044	-.0023	18.45	-.0262	-.0111	.0257	-.0109	.0048	-.0017
20.49	.0138	.0169	-.0069	.0003	-.0037	-.0029	20.49	-.0172	-.0093	.0128	-.0074	.0048	-.0022
23.50	-.0160	.0060	-.0162	.0015	-.0015	.0042	23.50	-.0193	-.0150	.0184	-.0050	.0051	-.0067
$\delta = 16.0$							$\delta = -14.5$						
- 2.00	.1078	.0025	-.0456	.0247	-.0002	.0043	- 2.06	-.1107	.0105	.0514	-.0238	-.0028	-.0021
.05	.1500	.0050	-.0473	.0245	-.0012	.0043	- .04	-.1346	.0060	.0473	-.0255	-.0017	-.0030
2.11	.1312	.0081	-.0452	.0245	-.0018	.0068	2.01	-.1278	.0037	.0511	-.0245	-.0009	-.0034
4.16	.1261	.0114	-.0477	.0242	-.0024	.0053	4.07	-.1359	.0008	.0511	-.0250	-.0003	-.0033
6.20	.1076	.0126	-.0414	.0227	-.0034	.0049	6.14	-.1296	-.0025	.0520	-.0256	-.0006	-.0047
8.26	.1212	.0205	-.0388	.0212	-.0044	.0070	8.19	-.1283	-.0092	.0491	-.0253	.0019	-.0050
10.34	.1209	.0255	-.0289	.0184	-.0051	.0064	10.25	-.1353	-.0164	.0474	-.0226	.0029	-.0031
12.36	.0776	.0237	-.0300	.0139	-.0057	.0066	12.30	-.0962	-.0175	.0424	-.0206	.0042	-.0027
14.39	.0435	.0208	-.0218	.0102	-.0048	.0063	14.35	-.1031	-.0238	.0395	-.0162	.0046	-.0009
16.44	.0515	.0297	-.0190	.0082	-.0058	.0094	16.39	-.0870	-.0249	.0341	-.0138	.0050	-.0012
18.47	.0467	.0275	-.0179	.0057	-.0058	.0103	18.42	-.0759	-.0265	.0283	-.0110	.0050	-.0019
20.49	.0088	.0198	-.0058	-.0016	-.0044	.0091	20.46	-.0649	-.0280	.0233	-.0074	.0053	-.0023
23.50	-.0113	.0122	-.0158	.0025	-.0035	.0105	23.49	-.0491	-.0302	.0154	-.0030	.0057	-.0074
$\delta = 30.6$							$\delta = -29.3$						
- 2.00	.1765	.0168	-.0889	.0445	-.0050	.0107	- 2.12	-.2511	.0326	.0850	-.0445	-.0084	-.0059
.05	.2043	.0222	-.0889	.0443	-.0064	.0145	- .08	-.2557	.0244	.0846	-.0445	-.0068	-.0114
2.11	.2132	.0256	-.0824	.0429	-.0074	.0143	4.03	-.2821	.0116	.0924	-.0482	-.0045	-.0083
4.17	.1746	.0276	-.0803	.0406	-.0086	.0125	6.08	-.2806	.0034	.0929	-.0480	-.0029	-.0112
6.23	.1695	.0334	-.0758	.0385	-.0101	.0119	8.15	-.2566	-.0058	.0897	-.0479	-.0000	.0135
8.27	.1641	.0387	-.0704	.0369	-.0113	.0140	10.19	-.2736	-.0221	.0865	-.0457	-.0027	-.0095
10.33	.1356	.0409	-.0584	.0326	-.0126	.0129	12.26	-.2246	-.0288	.0751	-.0408	-.0047	-.0073
12.35	.1047	.0443	-.0548	.0230	-.0130	.0177	14.30	-.2216	-.0411	.0707	-.0345	.0065	-.0038
14.38	.0377	.1170	-.0441	.0182	-.0133	.0167	16.36	-.1950	-.0467	.0573	-.0281	.0069	.0012
16.43	.0555	.0426	-.0421	.0145	-.0135	.0186	18.39	-.1650	-.0471	.0480	-.0231	.0078	-.0014
18.47	.0399	.0432	-.0295	.0087	-.0130	.0191	20.44	-.1258	-.0471	.0366	-.0172	.0089	-.0033
20.49	.0230	.0465	-.0170	-.0025	-.0119	.0222	23.47	-.1185	-.0586	.0236	-.0094	.0108	-.0098
23.49	-.0121	.0307	-.0338	.0042	-.0099	.0223							

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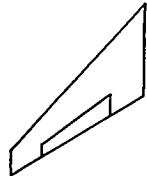


TABLE 3.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.25$ ;  $R = 0.60$

(a) Plain leading edge

$\alpha_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 6.7$							$\delta = -5.1$						
- 2.07	.0368	.0010	-.0216	.0107	-.0000	.0047	- 2.08	+.2233	.0005	.0022	-.0101	.0001	.0026
.01	.0371	.0020	-.0235	.0110	-.0003	.0039	- .00	-.0367	.0011	.0198	-.0099	-.0001	.0004
2.09	.0397	.0026	-.0233	.0109	-.0007	.0038	4.17	-.0324	-.0017	.0184	-.0098	.0006	.0021
4.18	.0376	.0039	-.0242	.0105	-.0011	.0042	6.26	-.0300	-.0030	.0167	-.0089	.0011	.0011
6.27	.0356	.0049	-.0219	.0098	-.0014	.0047	8.35	-.0250	-.0032	.0167	-.0068	.0019	.0012
8.36	.0266	.0056	-.0183	.0087	-.0017	.0043	10.45	-.0298	-.0059	.0148	-.0063	.0015	-.0009
10.45	-.0037	.0018	-.0124	.0060	-.0020	.0031	12.52	-.0398	-.0095	.0134	-.0055	.0019	.0006
12.54	.0221	.0081	-.0114	.0055	-.0023	.0049	14.59	-.0380	-.0112	.0124	-.0044	.0021	.0001
14.60	.0038	.0042	-.0108	.0052	-.0025	.0047	16.65	-.0250	-.0088	.0109	-.0047	.0022	-.0005
16.64	-.0123	-.0000	-.0106	.0043	-.0026	.0045	18.63	-.0322	-.0108	.0004	-.0035	.0021	-.0004
18.65	.0029	.0057	-.0093	.0034	-.0022	.0047	20.63	-.0269	-.0125	.0088	-.0018	.0009	-.0001
20.66	.0104	.0088	-.0092	.0045	-.0035	.0050	23.70	-.0147	-.0091	.0074	-.0007	-.0003	.0029
23.61	-.1171	-.0463	-.0170	.0026	-.0027	.0070							
$\delta = 12.0$							$\delta = -10.5$						
- 2.03	.1145	.0007	-.0377	.0192	-.0006	.0069	- 2.10	+.0756	.0055	.0354	-.0189	-.0010	.0027
.06	.1101	.0033	-.0385	.0193	-.0012	.0041	- .02	-.0806	.0033	.0365	-.0195	-.0006	.0040
2.14	.1152	.0051	-.0385	.0191	-.0018	.0039	2.06	-.0783	.0007	.0352	-.0187	-.0002	.0042
4.22	.1156	.0096	-.0382	.0184	-.0026	.0041	4.15	-.0764	-.0021	.0354	-.0193	.0008	.0052
6.31	.1164	.0145	-.0329	.0171	-.0035	.0055	6.24	-.0737	-.0048	.0338	-.0177	.0015	.0044
8.41	.1046	.0180	-.0230	.0153	-.0035	.0052	8.34	-.0599	-.0066	.0274	-.0148	-.0029	.0043
10.47	.0451	.0131	-.0140	.0084	-.0038	.0034	10.43	-.0618	-.0101	.0241	-.0129	.0028	.0025
12.19	-.4251	-.0891	-.0527	.0087	-.0045	.0029	12.52	-.0574	-.0132	.0230	-.0117	.0035	.0030
14.63	.0524	.0204	-.0129	.0087	-.0049	.0056	14.51	-.1373	-.0370	.0144	-.0100	.0039	.0015
16.67	.0356	.0182	-.0123	.0073	-.0049	.0053	16.63	-.0677	-.0222	.0177	-.0095	.0044	.0015
18.65	.0154	.0158	-.0210	.0062	-.0049	.0059	18.63	-.0449	-.0162	.0075	-.0076	.0049	.0014
20.68	.0548	.0287	-.0136	.0064	-.0059	.0071	20.63	-.0233	-.0128	.0119	-.0049	.0032	.0004
23.73	.0369	.0255	-.0114	.0038	-.0044	.0080	23.69	-.0264	-.0159	.0137	-.0032	.0021	.0034
$\delta = 16.0$							$\delta = -14.5$						
- 2.03	.1348	.0028	-.0590	.0261	-.0011	.0101	- 2.10	+.0945	.0089	.0354	-.0242	-.0019	.0047
.05	.1350	.0056	-.0565	.0259	-.0018	.0092	- .01	-.1091	.0063	.0551	-.0257	-.0014	.0053
2.14	.1396	.0285	-.0530	.0247	-.0027	.0081	2.07	-.1018	.0033	.0545	-.0254	-.0009	.0055
4.22	.1386	.0133	-.0543	.0246	-.0038	.0076	4.15	-.0996	.0002	.0551	-.0258	.0003	.0073
6.31	.1249	.0174	-.0465	.0213	-.0047	.0101	6.24	-.0973	-.0044	.0445	-.0249	.0019	.0068
8.41	.1178	.0217	-.0355	.0189	-.0046	.0085	8.34	-.0879	-.0076	.0463	-.0212	-.0034	.0047
10.48	.0537	.0171	-.0230	.0104	-.0047	.0071	10.43	-.0920	-.0129	.0384	-.0174	.0034	.0020
12.57	.0702	.0243	-.0228	.0107	-.0056	.0100	12.53	-.0521	-.0097	.0391	-.0167	.0046	.0015
14.61	.0421	.0201	-.0246	.0103	-.0061	.0104	14.59	-.0571	-.0146	.0350	-.0143	.0051	.0013
16.65	.0164	.0147	-.0226	.0085	-.0061	.0101	16.62	-.0786	-.0238	.0308	-.0136	.0057	-.0012
20.68	.0589	.0336	-.0200	.0081	-.0081	.0128	18.65	-.0329	-.0112	.0208	-.0107	.0066	-.0008
23.72	.0174	.0200	-.0176	.0054	-.0070	.0147	20.64	-.0248	-.0123	.0237	-.0075	.0046	-.0026
							23.68	-.0620	-.0319	.0259	-.0045	.0031	.0014
$\delta = 30.6$							$\delta = -29.3$						
.08	.2225	.0236	-.0885	.0405	-.0071	.0213	- .05	-.2019	.0247	.0880	-.0422	-.0066	.0127
2.16	.2254	.0287	-.0882	.0404	-.0088	.0207	2.03	-.2071	.0202	.0963	-.0459	-.0062	.0129
4.26	.2255	.0370	-.0864	.0388	-.0105	.0231	4.11	-.2130	.0127	.0938	-.0453	-.0041	.0158
6.36	.2257	.0460	-.0739	.0330	-.0124	.0248	6.20	-.2146	.0025	.0952	-.0465	-.0009	.0145
8.43	.1693	.0479	-.0539	.0254	-.0113	.0242	8.30	-.1965	-.0054	.0852	-.0420	.0019	.0106
10.49	.0997	.0421	-.0393	.0167	-.0111	.0217	10.38	-.1895	-.0158	.0706	-.0363	.0034	.0051
12.57	.0732	.0415	-.0365	.0151	-.0117	.0225	12.46	-.1801	-.0258	.0638	-.0328	.0054	.0045
14.61	.0606	.0429	-.0371	.0142	-.0125	.0228	14.55	-.1428	-.0258	.0588	-.0301	.0069	.0025
16.65	.0360	.0384	-.0370	.0114	-.0122	.0239	16.60	-.1403	-.0345	.0684	-.0260	.0080	-.0005
18.66	.0506	.0490	-.0444	.0124	-.0144	.0259	18.61	-.1156	-.0344	.0379	-.0199	.0083	-.0035
20.67	.0810	.0613	-.0325	.0117	-.0166	.0289	20.63	-.0713	-.0240	.0427	-.0170	.0072	-.0062
23.72	.0484	.0536	-.0274	.0068	-.0146	.0316	23.68	-.0778	-.0435	.0418	-.0161	.0087	-.0063

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TABLE 3.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{y_1}{b/2} = 0.25$ ;  $H = 0.60$  - Concluded

(b) Modified leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_Y$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_Y$
$\delta = 6.7$							$\delta = -5.1$						
- 2.05 .02	.0370 .0494	-.0010 .0008	-.0212 .0188	.0110 .0105	+.0004 -.0003	+.0016 -.0006	- 2.07 .00	-.0563 .0438	.0033 .0016	.0229 .0249	-.0103 -.0105	-.0006 -.0001	-.0031 -.0042
2.11 4.20	.0684 .0590	-.0195 .0038	.0102 -.0188	-.0005 .0103	+.0001 -.0006	-.0005 +.0005	2.09 4.17	-.0238 -.0399	.0005 -.0002	.0256 .0254	-.0100 -.0104	-.0001 -.0004	-.0045 -.0040
6.30 8.38	.0545 .0497	-.0184 .0072	.0101 -.0159	-.0013 .0093	+.0010 -.0016	+.0014 -.0016	6.26 8.35	-.0536 -.0388	-.0026 -.0023	.0253 .0257	-.0105 -.0103	-.0010 -.0015	-.0038 -.0041
10.46 12.53	.0428 .0381	-.0140 .0095	.0083 .0114	-.0021 .0073	+.0010 -.0024	+.0010 -.0020	10.45 12.52	+.0278 -.0088	.0079 -.0026	.0231 -.0209	-.0090 -.0089	-.0021 -.0023	-.0036 -.0048
14.57 16.63	.0258 .0254	-.0096 .0105	.0073 -.0058	-.0025 .0040	+.0016 -.0023	+.0016 -.0013	14.56 16.62	-.0081 -.0305	-.0013 -.0089	.0180 -.0184	-.0057 -.0057	-.0019 -.0021	-.0052 -.0065
18.67 20.69	.0018 .0173	-.0051 .0111	.0023 -.0006	-.0019 -.0003	+.0021 -.0015	+.0021 -.0015	18.69 20.69	+.0043 -.0065	+.0010 -.0017	.0153 -.0160	-.0050 -.0019	-.0023 -.0013	-.0063 -.0062
23.71	.0226	-.0143	-.0044	.0011	-.0012	+.0004	23.72	+.0067	+.0005	.0134	-.0046	-.0031	-.0105
$\delta = 12.0$							$\delta = -10.5$						
- 2.04 .04	.0812 .0984	-.0002 .0027	-.0429 -.0402	.0195 .0188	-.0000 -.0010	+.0025 -.0010	- 2.11 .03	-.1165 -.0922	.0082 .0041	.0394 .0402	-.0191 -.0197	-.0018 -.0010	-.0013 -.0018
2.12 4.21	.1153 .1011	-.0053 .0079	-.0404 -.0390	.0190 .0182	-.0014 -.0019	-.0004 -.0009	2.06 4.15	-.0840 -.0902	-.0004 -.0004	.0428 -.0422	-.0195 -.0199	-.0004 -.0001	-.0036 -.0008
6.31 8.39	.0895 .0872	-.0105 .0144	-.0388 -.0339	.0175 .0158	-.0027 -.0034	-.0006 +.0009	6.24 8.32	-.1013 -.0939	-.0038 -.0070	.0420 -.0414	-.0202 -.0205	-.0011 -.0012	-.0012 -.0011
10.46 12.53	.0685 .0742	-.0146 .0146	-.0289 -.0280	.0132 .0115	-.0041 -.0045	+.0002 +.0018	10.41 12.49	-.0946 -.0556	-.0146 -.0119	.0360 -.0313	-.0174 -.0161	-.0033 -.0038	-.0001 -.0008
14.58 16.63	.0544 .0307	-.0238 .0194	-.0186 -.0168	.0074 .0063	-.0044 -.0044	+.0012 +.0017	14.55 16.60	-.0427 -.0531	-.0108 -.0158	.0286 -.0255	-.0122 -.0104	-.0038 -.0041	-.0016 -.0032
18.67 20.68	.0249 .0118	-.0210 .0205	-.0129 -.0007	.0036 -.0048	-.0040 -.0023	+.0021 -.0033	18.65 20.69	-.0360 -.0154	-.0142 -.0110	.0199 -.0213	-.0093 -.0056	-.0045 -.0037	-.0036 -.0045
23.71	.0278	-.0254	-.0151	.0008	-.0022	-.0007	23.69	-.0266	-.0166	.0195	-.0057	-.0046	-.0078
$\delta = 16.0$							$\delta = -14.5$						
- 2.03 .05	.1088 .1358	-.0013 .0050	-.0536 -.0497	.0252 .0249	-.0003 -.0015	+.0090 +.0048	- 2.13 .04	-.1556 -.1380	.0121 .0068	.0520 -.0532	-.0245 -.0250	-.0028 -.0018	-.0025 -.0024
2.14 4.22	.1452 .1239	-.0078 .0112	-.0494 -.0467	.0244 .0233	-.0020 -.0029	+.0053 +.0046	2.04 4.13	-.1243 -.1346	-.0037 -.0009	.0551 -.0552	-.0245 -.0248	-.0011 -.0004	-.0015 -.0021
6.31 8.41	.1169 .1358	-.0146 .0224	-.0466 -.0444	.0223 -.0207	-.0038 -.0050	+.0061 +.0068	6.22 8.30	-.1474 -.1388	-.0040 -.0094	.0547 -.0537	-.0242 -.0238	-.0011 -.0019	-.0012 -.0007
10.48 12.54	.0935 .0893	-.0208 .0293	-.0329 -.0312	.0173 .0152	-.0057 -.0061	+.0071 +.0087	10.40 12.48	-.1270 -.0833	-.0170 -.0122	.0488 -.0390	-.0210 -.0182	-.0031 -.0038	-.0009 -.0020
14.58 16.63	.0690 .0516	-.0307 .0316	-.0229 -.0195	.0099 -.0077	-.0061 -.0059	+.0086 +.0085	14.54 16.57	-.0744 -.0956	-.0138 -.0243	.0363 -.0308	-.0139 -.0106	-.0039 -.0044	-.0020 -.0036
18.69 20.70	.0478 .0230	-.0323 .0288	-.0147 -.0038	.0040 -.0033	-.0055 -.0042	+.0087 -.0113	18.63 20.65	-.0828 -.0597	-.0250 -.0243	.0276 -.0263	-.0104 -.0067	-.0050 -.0050	-.0046 -.0058
23.73	.0498	-.0394	-.0158	.0016	-.0041	+.0078	23.69	-.0501	-.0236	.0256	-.0078	-.0059	-.0114
$\delta = 30.6$							$\delta = -29.3$						
- 2.01 .08	.1855 .2142	-.0162 .0219	-.0901 -.0860	.0429 +.0419	-.0049 -.0065	+.0165 +.0155	- 2.17 .08	-.2632 -.2409	.0341 .0264	.0840 -.0882	-.0415 -.0428	-.0086 -.0074	-.0115 -.0120
2.14 4.25	.2158 .2014	-.0258 .0304	-.0838 -.0802	.0400 -.0386	-.0074 -.0089	+.0150 +.0148	2.00 4.08	-.2404 -.2560	-.0200 -.0141	.0906 -.0939	-.0433 -.0456	-.0057 -.0047	-.0120 -.0105
6.33 8.42	.1869 .1882	-.0368 .0460	-.0791 -.0739	.0374 -.0326	-.0105 -.0120	+.0159 +.0180	6.07 8.26	-.4057 -.2593	-.0096 -.0053	.0846 -.0966	-.0466 -.0480	-.0031 -.0000	-.0108 -.0090
10.49 12.53	.1570 .1141	-.0470 .0507	-.0629 -.0508	.0286 -.0225	-.0131 -.0130	+.0183 +.0201	10.34 12.42	-.2453 -.2064	-.0191 -.0207	.0898 -.0752	-.0442 -.0403	-.0026 -.0041	-.0056 -.0030
14.58 16.64	.0763 .0448	-.0489 .0430	-.0438 -.0355	.0155 -.0113	-.0128 -.0123	+.0206 +.0196	14.48 16.56	-.1826 -.1425	-.0283 -.0290	.0644 -.0517	-.0318 -.0241	-.0054 -.0061	-.0009 -.0039
18.67 20.69	.0268 .0362	-.0430 .0516	-.0199 -.0194	.0038 -.0014	-.0016 -.0123	+.0192 +.0245	18.59 20.64	-.1474 -.1058	-.0390 -.0350	.0463 -.0433	-.0212 -.0169	-.0073 -.0081	-.0052 -.0078
23.72	.0402	-.0533	-.0328	.0054	-.0130	+.0220	23.67	-.0919	-.0403	.0387	-.0137	-.0092	-.0180

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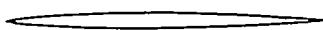
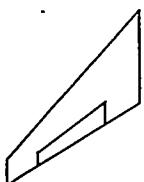


TABLE 4.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.25$ ;  $K = 0.70$

## (a) Plain leading edge

$\alpha_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 6.7$												$\delta = -5.1$	
-2.08	.0334	.0009	-.0233	.0106	-.0000	.0029	-2.10	-.0320	.0021	.0202	-.0097	-.0003	-.0011
- .00	.0336	.0018	-.0251	.0111	-.0003	.0034	- .01	-.0392	.0010	.0198	-.0098	-.0002	-.0001
2.10	.0376	.0025	-.0237	.0102	-.0006	.0037	2.10	-.0290	-.0004	.0199	-.0098	.0001	.0007
4.22	.0362	.0040	-.0250	.0106	-.0012	.0034	4.21	-.0284	-.0012	.0198	-.0098	.0006	.0015
6.32	-.0540	-.0058	-.0287	.0095	-.0014	.0038	6.30	-.1160	-.0123	.0108	-.0089	.0006	.0001
8.43	.0351	.0066	-.0158	.0079	-.0017	.0029	8.41	-.0342	-.0040	.0227	-.0070	.0017	-.0002
10.53	.0217	.0064	-.0144	.0055	-.0019	.0034	10.52	-.0170	-.0036	.0145	-.0058	.0015	-.0006
12.62	.0271	.0090	-.0174	.0054	-.0023	.0049	12.60	-.0153	-.0044	.0124	-.0054	.0017	.0001
14.59	-.0688	-.0150	-.0224	.0049	-.0025	.0047	14.66	-.0268	-.0084	.0112	-.0044	.0019	.0001
16.72	.0216	.0101	-.0117	.0042	-.0025	.0062	16.72	-.0058	-.0021	.0097	-.0047	.0021	.0014
18.71	.0026	.0056	-.0132	.0036	-.0023	.0062	18.71	-.0124	-.0042	.0004	-.0029	.0010	.0005
20.73	.0139	.0096	-.0115	.0037	-.0030	.0059	20.74	-.0082	-.0012	.0068	-.0021	.0003	.0018
23.80	-.0057	.0022	-.0111	.0028	-.0030	.0027	23.79	-.0139	-.0096	.0077	-.0013	.0001	.0033
$\delta = 12.0$												$\delta = -10.5$	
-2.03	.1167	.0006	-.0412	.0194	-.0006	.0076	-2.11	-.0708	.0052	.0352	-.0184	-.0011	.0009
.06	.1152	.0033	-.0420	.0197	-.0012	.0038	- .02	-.0840	.0031	.0376	-.0194	-.0007	.0036
2.16	.1155	.0053	-.0401	.0186	-.0017	.0034	2.09	-.0778	.0007	.0374	-.0192	-.0002	.0039
4.25	.1162	.0101	-.0404	.0185	-.0027	.0039	4.19	-.0737	-.0018	.0383	-.0194	-.0008	.0048
6.37	.0223	.0038	-.0426	.0165	-.0025	.0054	6.29	-.1618	-.0150	.0278	-.0180	.0015	.0028
8.46	.0944	.0171	-.0224	.0148	-.0035	.0050	8.41	-.0598	-.0090	.0353	-.0158	.0030	.0019
10.56	.0613	.0175	-.0173	.0078	-.0038	.0050	10.52	-.0385	-.0061	.0246	-.0123	.0028	.0018
12.64	.0578	.0185	-.0204	.0096	-.0045	.0064	12.60	-.0380	-.0211	.0208	-.0113	.0034	.0027
14.71	.0631	.0231	-.0167	.0087	-.0048	.0067	14.67	-.0259	-.0078	.0187	-.0105	.0039	.0004
16.75	.0599	.0255	-.0171	.0069	-.0046	.0083	16.71	-.0253	-.0083	.0159	-.0098	.0044	.0017
18.74	.0491	.0256	-.0231	.0062	-.0047	.0083	18.68	-.0382	-.0158	.0066	-.0065	.0034	.0004
20.76	.0604	.0311	-.0177	.0059	-.0057	.0083	20.72	-.0032	-.0047	.0114	-.0049	.0025	.0018
23.82	.0299	.0216	-.0143	.0029	-.0038	.0071	23.80	-.0272	-.0162	.0142	-.0043	.0028	.0030
$\delta = 16.0$												$\delta = -14.5$	
-2.04	.1370	.0026	-.0580	.0261	-.0012	.0086	-2.10	-.0900	.0089	.0490	-.0240	-.0020	.0028
.04	.1373	.0058	-.0610	.0261	-.0020	.0073	- .01	-.1066	.0064	.0575	-.0260	-.0015	.0045
2.16	.1358	.0083	-.0549	.0237	-.0026	.0073	2.08	-.1060	.0033	.0580	-.0261	-.0008	.0051
4.26	.1387	.0136	-.0545	.0237	-.0039	.0076	4.18	-.1018	-.0004	.0580	-.0262	-.0004	.0057
6.36	.0294	.0060	-.0527	.0204	-.0043	.0080	6.29	-.1899	-.0146	.0472	-.0247	-.0015	.0039
8.48	.1014	.0206	-.0295	.0157	-.0046	.0083	8.40	-.0875	-.0070	.0517	-.0214	-.0033	.0022
10.56	.0682	.0213	-.0241	.0091	-.0047	.0089	10.52	-.0625	-.0079	.0394	-.0182	-.0036	.0008
12.64	.0686	.0236	-.0278	.0112	-.0057	.0102	12.60	-.0585	-.0117	.0351	-.0159	-.0043	.0014
14.69	.0532	.0233	-.0265	.0103	-.0060	.0110	14.66	-.0530	-.0134	.0326	-.0144	-.0050	.0002
16.74	.0614	.0287	-.0238	.0082	-.0059	.0120	16.71	-.0338	-.0097	.0271	-.0131	-.0056	.0002
18.73	.0384	.0242	-.0273	.0076	-.0062	.0113	18.72	-.0279	-.0059	.0189	-.0097	.0046	-.0020
20.75	.0694	.0375	-.0247	.0075	-.0077	.0134	20.73	-.0060	-.0046	.0227	-.0076	.0039	-.0011
23.82	.0327	.0263	-.0181	.0050	-.0070	.0137	23.81	-.0170	-.0108	.0255	-.0059	.0037	.0006
$\delta = 30.6$												$\delta = -29.3$	
-2.00	.2355	.0191	-.0906	.0408	-.0061	.0235	-2.14	-.1783	.0288	.0821	-.0384	-.0077	.0099
.10	.2292	.0241	-.0891	.0390	-.0070	.0209	- .04	-.1895	.0262	.0873	-.0398	-.0071	.0131
2.19	.2239	.0288	-.0876	.0380	-.0086	.0211	2.05	-.1897	.0206	.0901	-.0416	-.0059	.0139
4.30	.2261	.0378	-.0884	.0365	-.0105	.0230	4.15	-.1997	.0131	.0908	-.0423	-.0040	.0136
6.40	.1109	.0344	-.0799	.0299	-.0121	.0246	6.26	-.2816	.0061	.0809	-.0420	-.0010	.0107
8.49	.1603	.0486	-.0508	.0231	-.0113	.0230	8.36	-.1702	-.0028	.0780	-.0356	-.0020	.0074
10.57	.1075	.0456	-.0418	.0157	-.0111	.0232	10.47	-.1527	-.0100	.0668	-.0323	-.0029	.0026
12.65	.0956	.0470	-.0435	.0159	-.0119	.0234	12.65	-.0467	.0049	.0708	-.0317	-.0044	.0035
14.70	.0810	.0478	-.0401	.0131	-.0118	.0236	14.64	-.1187	.0190	.0550	-.0282	-.0057	-.0002
16.75	.0809	.0525	-.0402	.0117	-.0120	.0246	16.69	-.0911	-.0176	.0448	-.0236	-.0064	-.0008
18.73	.0603	.0492	-.0414	.0118	-.0137	.0270	18.69	-.0834	-.0192	.0386	-.0191	-.0055	-.0035
20.77	.0932	.0648	-.0560	.0113	-.0163	.0296	20.72	-.0494	-.0115	.0438	-.0173	-.0048	-.0037
23.83	.0478	.0523	-.0286	.0068	-.0153	.0314	23.78	-.0914	-.0343	.0461	-.0167	.0070	-.0056

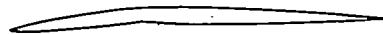
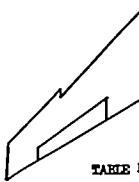


TABLE 4--INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{r_1}{b/2} = 0.25$ ;  $M = 0.70$  - Concluded

(b) Modified leading edge

$\alpha$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 6.7$							$\delta = -5.1$						
-2.06	.0547	-.0015	-.0208	.0108	.0004	.0028	-2.10	-.0489	.0034	.0266	-.0107	-.0006	-.0039
.02	.0552	.0006	-.0198	.0103	-.0003	-.0002	.01	-.0447	.0016	.0256	-.0103	-.0002	-.0037
2.13	.0591	.0026	-.0200	.0103	.0006	.0002	2.10	-.0382	.0009	.0263	-.0101	-.0006	-.0041
4.23	.0687	.0051	-.0193	.0106	.0009	.0007	4.21	-.0188	.0020	.0275	-.0102	-.0004	-.0037
6.34	.0462	.0051	-.0184	.0103	.0014	.0007	6.32	-.0471	-.0013	.0273	-.0104	.0010	-.0032
8.44	.0610	.0091	-.0187	.0085	-.0017	.0009	8.41	-.0332	-.0039	.0248	-.0096	.0015	-.0032
10.53	.0497	.0112	-.0124	.0078	-.0020	.0013	10.51	-.0187	.0011	.0216	-.0093	.0022	-.0048
12.61	.0512	.0132	-.0125	.0057	-.0023	.0019	12.58	-.0231	-.0042	.0194	-.0074	.0023	-.0041
14.65	.0136	.0065	-.0085	.0046	-.0023	.0021	14.64	-.0320	-.0037	.0181	-.0052	.0017	-.0053
16.71	.0146	.0097	-.0051	.0037	-.0022	.0026	16.71	-.0215	-.0063	.0183	-.0053	.0020	-.0051
18.76	.0195	.0104	-.0091	.0022	-.0017	.0028	18.75	-.0060	-.0035	.0139	-.0046	.0019	-.0050
20.77	-.0055	.0065	-.0041	-.0036	-.0005	.0023	20.78	-.0041	-.0037	.0211	-.0021	.0009	-.0057
23.83	.0189	.0125	-.0079	.0019	-.0022	.0036	23.82	-.0091	-.0071	.0130	-.0046	.0030	-.0082
$\delta = 12.0$							$\delta = -10.5$						
-2.06	.0962	-.0009	-.0415	.0196	.0001	.0034	-2.12	-.0937	.0076	.0428	-.0190	-.0017	.0010
.04	.1003	.0028	-.0418	.0190	.0009	-.0004	.03	-.0988	.0043	.0425	-.0192	-.0010	.0017
2.14	.0985	.0052	-.0403	.0187	.0015	.0004	2.06	-.0997	.0022	.0440	-.0196	-.0006	.0009
4.25	.1157	.0094	-.0381	.0185	.0021	.0007	4.18	-.0759	.0016	.0449	-.0194	-.0001	.0009
6.36	.0871	.0107	-.0374	.0175	.0028	.0010	6.28	-.1133	-.0044	.0448	-.0195	.0010	.0005
8.44	.0846	.0148	-.0378	.0148	.0036	.0009	8.39	-.0862	-.0042	.0416	-.0188	.0022	.0004
10.54	.0826	.0179	-.0311	.0127	.0041	.0015	10.49	-.0679	-.0088	.0364	-.0170	.0032	-.0009
12.61	.0590	.0181	-.0247	.0089	-.0041	.0035	12.56	-.0629	-.0112	.0312	-.0147	.0034	-.0016
14.65	.0286	.0136	-.0212	.0075	-.0042	.0038	14.63	-.0518	-.0127	.0258	-.0108	.0034	-.0022
16.72	.0387	.0187	-.0189	.0053	-.0041	.0026	16.70	-.0381	-.0115	.0225	-.0097	.0038	-.0029
18.75	.0197	.0150	-.0143	.0031	-.0039	.0024	18.73	-.0404	-.0151	.0203	-.0082	.0038	-.0038
20.76	.0033	.0136	-.0022	-.0016	-.0024	.0022	20.77	-.0285	-.0148	.0252	-.0044	.0027	-.0059
23.82	.0274	.0217	-.0169	.0011	-.0028	.0027	23.81	-.0267	-.0168	.0199	-.0060	.0042	-.0070
$\delta = 16.0$							$\delta = -14.5$						
-2.05	.1264	.0007	-.0533	.0259	-.0003	.0061	-2.14	-.1346	.0119	.0560	-.0238	-.0020	.0032
.06	.1383	.0051	-.0528	.0249	-.0016	.0038	-2.05	-.1374	.0068	.0552	-.0244	-.0020	.0029
2.16	.1346	.0090	-.0508	.0242	-.0023	.0049	2.05	-.1435	.0043	.0580	-.0249	-.0013	.0021
4.26	.1405	.0137	-.0478	.0234	-.0031	.0055	4.16	-.1323	.0016	.0589	-.0249	-.0005	.0026
6.38	.1216	.0166	-.0478	.0224	-.0042	.0062	6.26	-.1498	-.0041	.0594	-.0248	-.0006	.0014
8.46	.1169	.0242	-.0461	.0194	-.0051	.0065	8.37	-.1410	-.0081	.0549	-.0235	-.0020	.0003
10.57	.1171	.0274	-.0380	.0167	-.0058	.0080	10.46	-.1185	-.0114	.0502	-.0210	.0034	-.0022
12.62	.0837	.0269	-.0283	.0117	-.0056	.0094	12.55	-.0935	-.0161	.0401	-.0176	.0038	-.0031
14.67	.0565	.0249	-.0251	.0094	-.0058	.0096	14.62	-.0852	-.0202	.0332	-.0127	.0037	-.0026
16.71	.0352	.0213	-.0195	.0070	-.0055	.0094	16.66	-.0803	-.0229	.0299	-.0115	.0043	-.0043
18.77	.0433	.0279	-.0144	.0036	-.0055	.0096	18.73	-.0602	-.0211	.0258	-.0103	.0048	-.0048
20.77	-.0065	.0181	-.0066	.0075	-.0063	.0085	20.75	-.0532	-.0237	.0307	-.0059	.0037	-.0090
23.83	.0391	.0302	-.0174	.0032	-.0057	.0101	23.79	-.0509	-.0267	.0262	-.0078	.0054	-.0105
$\delta = 30.6$							$\delta = -29.3$						
-2.03	.2018	.0148	-.0887	.0405	-.0049	.0170	-2.18	-.2292	.0341	.0888	-.0393	-.0086	.0146
.07	.1996	.0220	-.0877	.0391	-.0065	.0145	-2.10	-.2406	.0267	.0881	-.0411	-.0075	.0138
2.17	.2010	.0268	-.0836	.0375	-.0077	.0153	2.01	-.2379	.0206	.0898	-.0409	-.0057	.0127
4.28	.2140	.0330	-.0820	.0372	-.0089	.0163	4.12	-.2330	.0160	.0944	-.0429	-.0047	.0108
6.38	.1755	.0370	-.0817	.0359	-.0107	.0177	6.22	-.2587	.0056	.0952	-.0441	-.0029	.0109
8.48	.1836	.0496	-.0761	.0314	-.0124	.0195	8.32	-.2412	-.0026	.0940	-.0443	-.0001	.0072
10.57	.1462	.0576	-.0534	.0181	-.0143	.0227	10.43	-.2155	-.0111	.0847	-.0403	-.0026	.0030
12.61	.0938	.0489	-.0467	.0163	-.0119	.0226	12.51	-.1911	-.0169	.0751	-.0383	-.0039	.0013
14.66	.0605	.0441	-.0405	.0132	-.0118	.0212	14.57	-.1743	-.0266	.0627	-.0279	.0043	-.0004
16.71	.0535	.0458	-.0325	.0102	-.0120	.0203	16.63	-.1574	-.0326	.0498	-.0221	.0051	-.0045
18.75	.0102	.0396	-.0111	-.0021	-.0101	.0214	18.69	-.1222	-.0291	.0471	-.0218	.0063	-.0053
20.77	.0191	.0427	-.0174	.0044	-.0119	.0211	20.74	-.0972	-.0279	.0495	-.0171	.0060	-.0095
23.83	.0516	.0568	-.0314	.0052	-.0159	.0243	23.77	-.1057	-.0407	.0480	-.0179	.0079	-.0142

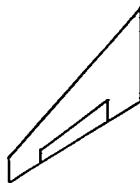


TABLE 5.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.25$ ;  $K = 0.81$

(a) Plain leading edge

$\alpha_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 6.7$												$\delta = -5.1$	
- 2.10 +01	.0324	.0009	-0.0252	.0108	-0.0000	.0027	- 2.10 +00	-0.0369	.0023	.0199	-0.0100	-0.0004	-0.0013
2.12	.0361	.0024	-0.0276	.0109	-0.0007	.0033	2.12	-0.0346	-0.0008	.0202	-0.0097	-0.0000	.0012
+4.25	.0337	.0035	-0.0258	.0108	-0.0012	.0038	4.24	-0.0319	-0.0021	.0216	-0.0099	-0.0007	.0016
6.38	.0415	.0050	-0.0245	.0098	-0.0013	.0045	6.36	-0.0243	-0.0018	.0177	-0.0090	-0.0007	.0006
8.49	.0249	.0042	-0.0186	.0075	-0.0018	.0043	8.49	-0.0186	-0.0021	.0175	-0.0059	-0.0016	.0022
10.59	-0.0409	.0021	-0.0142	.0045	-0.0019	.0041	10.60	-0.0242	-0.0046	.0151	-0.0044	-0.0012	-0.0005
12.67	.0061	.0048	-0.0167	.0056	-0.0024	.0045	12.68	-0.0308	-0.0077	.0129	-0.0053	-0.0017	-0.0000
14.74	.0183	.0091	-0.0171	.0053	-0.0027	.0053	14.74	-0.0203	-0.0059	.0108	-0.0050	-0.0018	.0002
16.77	-0.0223	-0.0038	-0.0092	.0033	-0.0021	.0048	16.81	-0.0157	-0.0049	.0086	-0.0042	-0.0015	-0.0003
18.79	.0026	.0050	-0.0115	.0034	-0.0021	.0045	18.78	-0.0147	-0.0061	.0069	-0.0028	-0.0011	-0.0000
20.82	.0287	.0164	-0.0167	.0035	-0.0027	.0045	20.83	.0129	.0041	.0027	-0.0027	.0010	.0014
23.90	.0052	.0077	-0.0109	.0024	-0.0023	.0070	23.91	.0037	-0.0001	.0104	-0.0024	.0012	.0020
$\delta = 12.0$												$\delta = -10.5$	
- 2.05 +06	.1157	.0009	-0.0463	.0203	-0.0006	.0060	- 2.13 +01	-0.0655	.0053	.0258	-0.0188	-0.0011	.0010
2.17	.1227	.0039	-0.0483	.0201	-0.0013	.0044	2.11	-0.0830	.0002	.0388	-0.0191	-0.0003	.0044
+4.31	.1281	.0109	-0.0452	.0190	-0.0018	.0047	4.29	-0.0758	-0.0023	.0400	-0.0198	-0.0009	.0046
6.42	.1144	.0144	-0.0381	.0162	-0.0032	.0067	6.35	-0.0681	-0.0038	.0359	-0.0184	-0.0013	.0035
8.55	.1020	.0200	-0.0257	.0123	-0.0036	.0068	8.47	-0.0563	-0.0055	.0325	-0.0145	-0.0027	.0038
10.63	.0566	.0162	-0.0221	.0088	-0.0039	.0069	10.58	-0.0536	-0.0089	.0250	-0.0107	-0.0024	.0015
12.72	.0764	.0245	-0.0248	.0099	-0.0046	.0072	12.69	-0.0524	-0.0067	.0211	-0.0116	-0.0034	.0011
14.79	.0783	.0284	-0.0244	.0088	-0.0051	.0074	14.74	-0.0448	-0.0125	.0203	-0.0109	-0.0040	.0005
16.81	.0323	.0168	-0.0151	.0062	-0.0041	.0079	16.78	-0.0583	-0.0184	.0186	-0.0093	-0.0040	-0.0004
18.82	.0640	.0311	-0.0225	.0058	-0.0043	.0076	18.78	-0.0335	-0.0133	.0148	-0.0063	-0.0028	-0.0002
20.87	.0874	.0435	-0.0253	.0052	-0.0049	.0085	20.82	-0.026	-0.0022	.0087	-0.0057	-0.0025	.0003
23.93	.0634	.0380	-0.0176	.0029	-0.0039	.0077	23.91	-0.0041	-0.0046	.0148	-0.0055	.0029	.0019
$\delta = 16.0$												$\delta = -14.5$	
- 2.05 +07	.1409	.0032	-0.0621	.0263	-0.0014	.0090	- 2.14 +01	-0.0845	.0106	.0282	-0.0232	-0.0023	.0036
2.18	.1463	.0070	-0.0633	.0258	-0.0023	.0076	2.11	-0.1120	.0075	.0594	-0.0264	-0.0020	.0050
+4.30	.1400	.0143	-0.0572	.0224	-0.0039	.0096	4.22	-0.1119	-0.0112	.0607	-0.0260	-0.0005	.0056
6.41	.1248	.0183	-0.0505	.0195	-0.0046	.0106	6.35	-0.1044	-0.0043	.0558	-0.0241	-0.0013	.0038
8.53	.0907	.0205	-0.0345	.0153	-0.0048	.0103	8.46	-0.0929	-0.0080	.0481	-0.0199	-0.0031	.0032
10.62	.0494	.0192	-0.0294	.0105	-0.0051	.0094	10.58	-0.0806	-0.0118	.0388	-0.0160	-0.0029	.0005
12.72	.0728	.0261	-0.0320	.0117	-0.0059	.0102	12.68	-0.0591	-0.0113	.0360	-0.0161	-0.0042	.0004
14.77	.0586	.0253	-0.0293	.0101	-0.0061	.0108	14.73	-0.0531	-0.0126	.0318	-0.0145	-0.0048	-0.0009
16.81	.0275	.0181	-0.0224	.0075	-0.0054	.0108	16.77	-0.0705	-0.0219	.0306	-0.0123	-0.0049	-0.0026
18.81	.0517	.0292	-0.0264	.0069	-0.0057	.0108	18.79	-0.0388	-0.0133	.0261	-0.0095	-0.0042	-0.0026
20.85	.0703	.0388	-0.0301	.0063	-0.0064	.0123	20.83	-0.0190	-0.0074	.0224	-0.0080	.0033	-0.0028
23.93	.0511	.0357	-0.0216	.0048	-0.0073	.0143	23.93	-0.0177	-0.0099	.0400	-0.0068	.0036	-0.0007
$\delta = 30.6$												$\delta = -29.3$	
- 2.03 +09	.2199	.0198	-0.0958	.0381	-0.0061	.0189	- 2.16 +03	-0.4324	.0275	.0862	-0.342	-0.0079	.0126
2.20	.2204	.0248	-0.0943	.0360	-0.0069	.0208	2.07	-0.1749	.0264	.0861	-0.369	-0.0072	.0143
+4.32	.2120	.0283	-0.0940	.0351	-0.0082	.0226	4.20	-0.1877	.0199	.0870	-0.378	-0.0058	.0140
6.44	.1781	.0448	-0.0745	.0252	-0.0116	.0260	6.32	-0.1831	.0054	.0867	-0.385	-0.0013	.0110
8.55	.1421	.0484	-0.0576	.0224	-0.0116	.0251	8.44	-0.1547	-0.0119	.0709	-0.303	-0.0015	.0063
10.63	.0796	.0421	-0.0490	.0160	-0.0113	.0213	10.55	-0.1367	-0.0103	.0577	-0.260	-0.0024	.0013
12.70	.0916	.0480	-0.0528	.0166	-0.0120	.0229	12.65	-0.1121	-0.0115	.0549	-0.268	-0.0040	.0009
14.75	.0638	.0434	-0.0454	.0125	-0.0110	.0216	14.73	-0.0854	-0.0119	.0459	-0.215	-0.0046	-0.0020
16.80	.0538	.0443	-0.0430	.0109	-0.0113	.0223	16.78	-0.0905	-0.0180	.0420	-0.182	-0.0046	-0.0044
18.81	.0726	.0542	-0.0429	.0104	-0.0127	.0257	18.78	-0.0627	-0.0124	.0417	-0.160	-0.0039	-0.0042
20.84	.0844	.0625	-0.0405	.0093	-0.0144	.0284	20.81	-0.0593	-0.0118	.0429	-0.159	-0.0030	-0.0040
23.93	.0831	.0703	-0.0323	.0059	-0.0156	.0288	23.89	-0.0651	-0.0179	.0515	-0.164	-0.0043	-0.0040

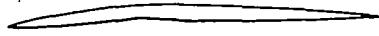
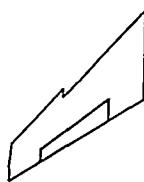


TABLE 5.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.25$ ;  $M = 0.81$  - Concluded

(b) Modified leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$
$\delta = 6.7$													
- 2.10 .03	.0488 .0569	-.0006 .0010	-.0206 .0227	.0108 .0108	+.0004 -.0003	+.0026 -.0003	- 2.12 .01	-.0566 -.0451	+.0039 .0017	.0283 .0247	-.0100 -.0099	-.0005 -.0003	-.0041 -.0038
2.16 4.28	.0620 .0511	.0028 .0058	-.0206 .0203	.0109 .0107	-.0006 +.0010	+.0008 +.0009	2.10 4.25	-.0773 -.0466	+.0009 -.0003	.0311 .0275	-.0102 +.0102	+.0001 +.0004	-.0042 -.0034
6.40 8.51	.0462 .0291	.0050 .0060	-.0188 .0148	.0095 .0076	-.0011 +.0018	+.0011 -.0018	6.37 8.49	-.0444 -.0402	-.0024 -.0042	.0211 .0261	+.0101 -.0090	+.0008 +.0014	-.0031 -.0039
10.59 12.66	.0338 .0287	.0079 .0085	-.0126 .0101	.0069 .0047	-.0020 +.0020	+.0028 +.0023	10.59 12.66	-.0213 -.0093	-.0020 +.0019	.0214 .0192	-.0082 +.0059	+.0019 +.0019	-.0039 -.0054
14.73 16.79	.0164 .0173	.0063 .0086	-.0077 .0056	.0045 .0032	-.0021 +.0019	+.0025 +.0030	14.73 16.78	-.0179 -.0117	-.0052 +.0033	.0199 .0149	-.0058 +.0051	+.0021 +.0022	-.0054 -.0052
18.84 20.87	-.0058 .0283	.0221 .0146	-.0021 .0099	.0020 .0034	-.0016 +.0024	+.0024 -.0025	18.86 20.85	-.0126 -.0126	-.0058 +.0016	.0198 .0028	-.0041 +.0009	+.0014 +.0009	-.0047 -.0060
23.95	.0300	.0178	-.0140	.0022	-.0023	+.0050	23.94	-.0021	-.0033	.0131	-.0035	.0023	-.0072
$\delta = 12.0$													
- 2.09 .04	.0944 .1043	-.0003 .0034	-.0445 -.0469	.0203 .0199	+.0001 -.0010	+.0008 -.0011	- 2.14 2.10	-.1047 -.1013	+.0068 +.0005	.0464 .0486	-.0189 -.0198	+.0018 +.0006	+.0016 +.0017
4.29 6.41	.0987 .0907	.0087 .0109	-.0443 -.0435	.0191 .0173	-.0016 -.0029	+.0006 +.0017	4.21 6.35	-.1100 -.1010	-.0030 -.0069	.0486 .0454	-.0198 +.0194	+.0001 +.0011	+.0009 +.0004
8.51 6.51	.0640 .0640	.0139 .0139	-.0327 -.0327	.0127 .0127	-.0057 +.0057	+.0019 +.0019	8.46 8.46	-.1068 -.1068	-.0112 +.0112	.0568 +.0568	-.0179 +.0179	+.0019 +.0019	-.0011 -.0011
10.60 12.68	.0546 .0617	.0148 .0187	-.0258 -.0222	.0103 .0087	-.0041 +.0039	+.0040 +.0045	10.64 12.63	-.0026 -.0524	-.0017 -.0107	.0469 +.0309	-.0159 +.0119	+.0030 +.0031	-.0014 -.0031
14.74 16.79	.0488 .0415	.0186 .0199	-.0189 -.0145	.0074 .0050	-.0040 +.0036	+.0038 +.0042	14.71 16.77	-.0560 -.0459	-.0141 -.0132	.0301 +.0294	-.0108 +.0098	+.0036 +.0039	-.0029 -.0039
18.85 20.87	-.0035 .0426	.0112 .0239	-.0038 -.0176	.0052 .0040	-.0011 +.0036	+.0035 +.0025	18.83 20.85	-.0472 -.0077	-.0172 +.0077	.0276 +.0079	-.0083 +.0079	+.0036 +.0033	-.0048 -.0072
23.92	.0158	.0164	-.0149	.0019	-.0028	+.0016	23.91	-.0376	-.0202	.0196	-.0068	.0044	-.0060
$\delta = 16.0$													
- 2.07 .06	.1244 .1356	.0020 .0065	-.0550 -.0506	.0258 .0243	-.0003 +.0019	+.0056 +.0038	- 2.16 2.10	-.1370 -.1327	+.0123 +.0076	.0588 +.0574	-.0233 -.0239	+.0030 +.0022	+.0033 +.0033
4.30 6.44	.1250 .1327	.0098 .0184	-.0513 -.0572	.0232 .0224	-.0025 -.0045	+.0054 +.0076	4.20 6.32	-.1500 -.1486	-.0045 -.0047	.0651 +.0617	-.0246 -.0248	+.0014 +.0007	+.0027 +.0006
8.52 10.61	.0916 .0769	.0215 .0234	-.0417 -.0313	.0163 .0118	-.0054 -.0057	+.0072 +.0091	8.45 10.55	-.1446 -.1055	-.0110 -.0141	.0611 +.0528	-.0227 +.0207	+.0017 +.0032	-.0013 +.0040
12.69 14.75	.0777 .0599	.0261 .0251	-.0282 -.0233	.0111 .0090	-.0055 -.0054	+.0100 +.0094	12.62 14.69	-.0865 -.0804	-.0161 -.0184	.0404 +.0357	-.0150 +.0135	+.0034 +.0039	-.0032 -.0037
16.81 18.84	.0486 -.0020	.0282 .0168	-.0172 -.0163	.0062 .0068	-.0050 -.0055	+.0097 +.0117	16.75 18.80	-.0757 -.0886	-.0206 -.0300	.0157 +.0364	-.0117 +.0103	+.0042 +.0045	-.0042 +.0055
20.86 23.94	.0331 .0300	.0259 .0296	-.0173 -.0189	.0049 .0030	-.0050 +.0057	+.0071 +.0100	20.85 23.89	-.0182 -.0694	-.0163 -.0330	.0157 +.0329	-.0101 +.0082	+.0043 +.0054	-.0094 +.0103
$\delta = 30.6$													
- 2.05 .07	.1874 .1950	.0158 .0222	-.0885 -.0884	.0386 -.0368	-.0047 +.0065	+.0176 +.0151	- .07 2.04	-.2094 -.2372	+.0259 +.0204	.0865 +.0926	-.0377 -.0386	+.0075 +.0059	+.0133 +.0122
2.19 4.31	.1883 .1769	.0272 .0312	-.0853 -.0811	.0357 -.0345	-.0075 +.0087	+.0160 +.0172	4.15 6.29	-.2457 -.2467	+.0144 +.0052	.0944 +.0939	-.0404 -.0415	+.0048 +.0027	+.0117 +.0090
6.44 8.54	.1750 .1504	.0373 .0515	-.0847 -.0735	.0335 -.0259	-.0107 +.0136	+.0199 +.0227	8.39 10.52	-.2402 -.1845	-.0065 -.0129	.0936 +.0936	-.0392 -.0349	+.0004 +.0025	+.0049 +.0009
10.63 12.67	.1095 .0795	.0523 .0434	-.0473 -.0427	.0159 -.0172	-.0137 +.0117	+.0232 +.0236	12.60 14.66	-.1449 -.1318	-.0131 -.0201	.0639 +.0511	-.0273 -.0215	+.0048 +.0037	+.0117 +.0022
14.71 16.81	.0452 .0530	.0582 .0454	-.0342 -.0314	.0126 -.0079	-.0112 +.0112	+.0210 +.0198	16.74 18.79	-.1160 -.1288	-.0219 -.0327	.0501 +.0528	-.0190 -.0190	+.0048 +.0049	+.0058 +.0058
18.87 20.87	.0460 .0683	.0511 .0569	-.0243 -.0395	.0017 -.0092	-.0098 -.0127	+.0215 +.0226	20.82 23.90	-.0877 -.1025	-.0268 -.0343	.0444 +.0547	-.0117 -.0189	+.0031 +.0067	+.0100 +.0098

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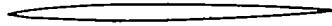
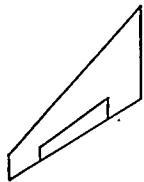
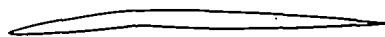
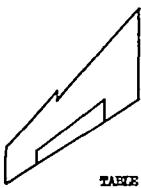


TABLE 6.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.25$ ;  $N = 0.85$

(a) Plain leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_Y$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_Y$
$\delta = -6.7$													$\delta = -5.1$
- 2.10	.0421	-.0005	-.0265	.0109	.0002	.0029	- 2.10	-.0294	.0009	.0235	-.0108	-.0002	-.0020
.01	.0425	.0009	-.0294	.0112	-.0001	.0019	.01	-.0387	-.0003	.0233	-.0110	.0001	-.0008
2.14	.0358	.0021	-.0279	.0110	-.0005	.0020	2.14	-.0357	-.0012	.0232	-.0104	.0004	-.0004
4.27	.0367	.0031	-.0248	.0105	.0008	.0026	4.27	-.0415	-.0034	.0242	-.0102	.0008	-.0005
6.41	.0371	.0037	-.0242	.0105	.0008	.0028	6.40	-.0250	-.0025	.0191	-.0083	.0009	-.0006
8.55	.0272	.0056	-.0254	.0074	.0019	.0044	8.54	-.0296	-.0047	.0206	-.0072	.0016	-.0007
10.65	.0189	.0055	-.0188	.0062	-.0022	.0041	10.64	-.0320	-.0068	.0183	-.0053	.0014	-.0008
12.70	.0116	.0058	-.0157	.0058	-.0023	.0048	12.71	-.0237	-.0067	.0147	-.0052	.0018	-.0002
14.77	.0091	.0053	-.0141	.0051	-.0025	.0049	14.79	-.0154	-.0035	.0123	-.0048	.0019	-.0001
16.83	.0056	.0057	-.0130	.0033	-.0020	.0047	16.83	-.0275	-.0099	.0134	-.0040	.0017	-.0006
18.86	.0385	.0175	-.0184	.0030	-.0018	.0001	18.83	-.0050	-.0036	.0079	-.0027	.0010	-.0003
$\delta = 12.0$													$\delta = -10.5$
- 2.05	.1211	-.0000	-.0483	.0202	-.0005	.0051	- 2.15	-.0629	.0055	.0176	-.0191	-.0012	.0024
.06	.1291	.0033	-.0511	.0199	-.0012	.0038	.00	-.0812	.0030	.0454	-.0211	-.0007	.0027
2.19	.1225	.0066	-.0482	.0190	-.0018	.0046	2.13	-.0751	.0005	.0446	-.0202	-.0001	.0033
4.31	.1056	.0094	-.0461	.0186	-.0023	.0078	4.26	-.0797	-.0030	.0457	-.0202	.0009	.0031
6.44	.1030	.0133	-.0415	.0161	-.0029	.0062	6.39	-.0633	-.0038	.0367	-.0177	.0013	.0021
8.57	.0728	.0152	-.0308	.0122	-.0038	.0068	8.52	-.0724	-.0090	.0367	-.0148	.0026	.0027
10.66	.0429	.0138	-.0217	.0085	-.0037	.0068	10.64	-.0479	-.0083	.0308	-.0118	.0026	.0004
12.73	.0572	.0197	-.0263	.0095	-.0044	.0067	12.69	-.0468	-.0110	.0257	-.0108	.0032	.0002
14.80	.0428	.0176	-.0227	.0083	-.0046	.0080	14.77	-.0447	-.0133	.0253	-.0099	.0035	-.0001
16.85	.0349	.0176	-.0172	.0061	-.0040	.0081	16.82	-.0435	-.0140	.0214	-.0091	.0038	-.0007
18.87	.0612	.0295	-.0236	.0051	-.0036	.0077	18.83	-.0003	-.0012	.0130	-.0074	.0034	-.0000
$\delta = 16.0$													$\delta = -14.5$
- 2.06	.1444	.0028	-.0614	.0249	-.0010	.0068	- 2.15	-.0764	.0110	.0230	-.0234	-.0024	.0035
.07	.1531	.0070	-.0642	.0251	-.0023	.0068	.00	-.1015	.0076	.0592	-.0262	-.0020	.0049
2.19	.1387	.0105	-.0599	.0228	-.0028	.0074	2.12	-.1056	.0038	.0624	-.0250	-.0011	.0061
4.32	.1351	.0147	-.0594	.0217	-.0036	.0084	4.25	-.1149	-.0011	.0661	-.0266	.0004	.0043
6.45	.1225	.0187	-.0520	.0188	-.0043	.0099	6.39	-.1000	-.0042	.0597	-.0245	.0015	.0036
8.59	.0939	.0216	-.0371	.0147	-.0053	.0109	8.51	-.1089	-.0113	.0562	-.0211	.0030	.0024
10.68	.0590	.0202	-.0274	.0104	-.0047	.0106	10.64	-.0739	-.0104	.0471	-.0181	.0032	.0009
12.73	.0662	.0244	-.0326	.0115	-.0058	.0099	12.70	-.0607	-.0115	.0401	-.0158	.0038	.0009
14.80	.0532	.0229	-.0289	.0100	-.0060	.0112	14.77	-.0688	-.0175	.0396	-.0140	.0044	-.0014
16.85	.0503	.0259	-.0249	.0074	-.0052	.0118	16.82	-.0683	-.0198	.0362	-.0125	.0047	-.0024
18.88	.0766	.0381	-.0302	.0057	-.0049	.0109	18.83	-.0341	-.0113	.0314	-.0108	.0045	-.0039
$\delta = 30.6$													$\delta = -29.3$
- 2.03	.2259	.0184	-.0947	.0369	-.0058	.0169	- 2.16	-.1388	.0263	.0595	-.0340	-.0078	.0127
.08	.2168	.0241	-.0948	.0347	-.0067	.0177	.03	-.1665	.0258	.0887	-.0367	-.0071	.0135
2.21	.2052	.0281	-.0914	.0337	-.0076	.0186	2.10	-.1825	.0199	.0913	-.0373	-.0057	.0138
4.34	.1945	.0358	-.0851	.0310	-.0098	.0209	4.22	-.1941	.0121	.0963	-.0396	-.0038	.0118
6.46	.1869	.0491	-.0796	.0233	-.0120	.0257	6.35	-.1819	.0057	.0896	-.0377	-.0017	.0101
8.59	.1450	.0507	-.0637	.0211	-.0122	.0247	8.48	-.1696	-.0060	.0749	-.0294	-.0013	.0047
10.66	.0892	.0459	-.0461	.0160	-.0112	.0200	10.60	-.1450	-.0126	.0660	-.0248	-.0023	.0002
12.73	.0918	.0472	-.0503	.0162	-.0113	.0219	12.68	-.0996	-.0106	.0541	-.0226	-.0033	-.0001
14.79	.0830	.0497	-.0484	.0129	-.0114	.0222	14.76	-.0902	-.0152	.0462	-.0186	-.0041	-.0018
16.85	.0676	.0492	-.0432	.0102	-.0110	.0221	16.81	-.0949	-.0211	.0447	-.0162	-.0041	-.0046
18.86	.0849	.0590	-.0425	.0088	-.0118	.0248	18.83	-.0649	-.0138	.0428	-.0153	-.0037	-.0050

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TABLE 6.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.25$ ;  $N = 0.85$  - Concluded

(b) Modified leading edge

$a_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_n$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$a_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_n$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 6.7$												$\delta = -5.1$	
- 2.11 + 0.3	.0549 .0660	-.0009 .0009	-.0231 .0244	.0113 .0111	+.0004 -.0003	.0031 .0008	- 2.13 + 0.3	-.0566 .0454	.0025 -.0000	.0286 .0280	-.0102 -.0104	-.0006 +.0003	-.0032 +.0029
2.16 + 0.604	.0025 .0604	-.0248 .0285	.0110 .0108	-.0006 .0012	.0008 .0008		+ 2.13 + 0.24	-.0564 .0529	-.0018 -.0037	.0292 .0246	-.0102 -.0111	.0001 .0003	-.0035 -.0038
4.31 + 0.532	.0037 .0532	-.0288 .0288	.0108 .0108	-.0012 .0012	.0008 .0008		6.41 8.51	-.0432 .0361	-.0039 .0048	.0241 .0286	-.0108 -.0085	.0009 .0015	-.0041 -.0043
6.44 + 0.669	.0060 .0669	-.0321 .0321	.0101 .0101	-.0016 .0016	.0014 .0014		10.62 12.70	-.0123 .0113	-.0014 .0031	.0171 .0201	-.0073 -.0061	.0017 .0019	-.0052 -.0046
8.53 + 0.321	.0059 .0059	-.0126 .0126	.0068 .0068	-.0020 .0020	.0014 .0014		14.77 16.82	-.0113 .0250	-.0022 -.0072	.0171 .0169	-.0073 -.0048	.0019 .0021	-.0046 -.0053
10.63 + 0.375	.0096 .0096	-.0140 .0140	.0056 .0056	-.0021 .0021	.0026 .0026		16.82 18.89	-.0123 .0020	-.0014 -.0042	.0171 .0057	-.0061 -.0023	.0017 .0052	-.0052 -.0034
12.71 + 0.365	.0082 .0082	-.0096 .0096	.0052 .0052	-.0021 .0021	.0030 .0030								
14.77 + 0.339	.0120 .0120	-.0133 .0133	.0043 .0043	-.0022 .0022	.0028 .0028								
16.82 + 0.179	.0087 .0179	-.0073 .0073	.0032 .0032	-.0018 .0018	.0028 .0028								
18.89 + 0.186	.0102 .0102	-.0066 .0066	.0028 .0028	-.0016 -.0016	.0025 .0025								
$\delta = 12.0$												$\delta = -10.5$	
- 2.09 + 0.4	.0982 .1122	.0002 .0036	-.0468 -.0467	.0205 .0192	-.0000 -.0010	.0030 .0002	- 2.17 + 0.3	-.1120 .1062	.0087 .0048	.0489 .0464	-.0192 -.0196	-.0019 +.0013	+.0019 +.0003
2.17 + 0.931	.0065 .1077	-.0462 .0352	.0189 .0179	-.0017 .0026	.0012 .0013		+ 2.11 + 0.24	-.1162 .1235	-.0016 -.0021	.0489 .0457	-.0197 -.0202	-.0006 -.0001	-.0005 -.0014
4.35 + 1.077	.0102 .1352	-.0352 .0352	.0179 .0179	-.0026 .0026	.0013 .0013		6.45 8.49	-.1155 .0954	-.0053 -.0125	.0476 .0479	-.0193 -.0193	.0009 .0019	-.0027 -.0045
6.45 + 1.104	.0222 .0552	-.0552 .0552	.0169 .0169	-.0033 .0033	.0238 .0238		10.57 12.66	-.0125 .0656	-.0125 -.0143	.0479 .0309	-.0193 -.0109	.0023 .0028	-.0057 -.0059
8.54 + 0.729	.0503 .0503	-.0319 .0319	.0124 .0124	-.0045 .0045	.0030 .0030		14.73 14.73	-.0123 .0587	-.0143 -.0152	.0412 .0276	-.0135 -.0101	.0023 .0032	-.0057 -.0056
10.63 + 0.502	.0499 .0502	-.0226 .0226	.0091 .0091	-.0039 .0039	.0045 .0045		16.79 18.86	-.0193 .0294	-.0024 -.0057	.0413 .0013	-.0048 +.0019	.0035 .0013	-.0067 -.0076
12.70 + 0.518	.0505 .0505	-.0252 .0252	.0090 .0090	-.0043 .0043	.0044 .0044								
14.78 + 0.482	.0528 .0528	-.0215 .0215	.0072 .0072	-.0040 .0040	.0052 .0052								
16.83 + 0.208	.0463 .0463	-.0146 .0146	.0048 .0048	-.0037 .0037	.0041 .0041								
18.87 + 0.117	.0297 .0297	-.0085 .0085	.0045 .0045	-.0033 -.0033	.0029 .0029								
$\delta = 16.0$												$\delta = -14.5$	
- 2.08 + 0.6	.1279 .1434	.0025 .0074	-.0575 -.0580	.0250 .0233	-.0005 -.0020	.0058 .0052	- 2.16 + 0.4	-.1320 .1308	.0131 .0084	.0641 .0611	-.0235 -.0237	-.0032 -.0025	+.0043 +.0043
2.19 + 1.286	.0112 .1386	-.0561 .0561	.0228 .0228	-.0027 .0027	.0057 .0057		+ 2.09 + 0.24	-.1486 .1593	-.0049 -.0002	.0654 .0636	-.0247 -.0264	-.0016 -.0008	+.0031 +.0022
4.31 + 1.162	.0138 .1382	-.0627 .0627	.0218 .0218	-.0036 .0036	.0067 .0067		6.45 8.48	-.1455 .1256	-.0046 -.0100	.0648 .0648	-.0261 -.0261	-.0005 -.0005	+.0003 +.0003
6.45 + 1.308	.0218 .0218	-.0673 .0673	.0208 .0208	-.0047 .0047	.0080 .0080		10.57 12.66	-.1118 .0656	-.0162 -.0125	.0540 .0448	-.0193 -.0158	.0028 .0030	-.0041 -.0047
8.56 + 1.168	.0292 .0292	-.0476 .0476	.0174 .0174	-.0065 .0065	.0100 .0100		12.66 14.71	-.0129 .0853	-.0129 -.0194	.0540 .0390	-.0193 -.0137	.0028 .0036	-.0041 -.0044
10.63 + 0.703	.0259 .0259	-.0333 .0333	.0104 .0104	-.0053 .0053	.0102 .0102		14.79 18.84	-.0123 .0401	-.0234 -.0228	.0400 .0106	-.0128 -.0115	.0043 .0051	-.0057 -.0073
12.71 + 0.681	.0246 .0246	-.0277 .0277	.0115 .0115	-.0059 .0059	.0100 .0100								
14.78 + 0.603	.0284 .0284	-.0248 .0248	.0087 .0087	-.0054 .0054	.0111 .0111								
16.79 + 0.238	.0116 .0341	-.0086 .0237	.0039 .0050	-.0034 -.0045	.0099 .0101								
18.91 + 0.582	.0582 .0582	-.0085 .0085	.0045 .0050	-.0045 -.0045	.0101 .0101								
$\delta = 30.6$												$\delta = -29.3$	
- 2.07 + 0.6	.1861 .1934	.0154 .0226	-.0902 -.0887	.0379 .0353	-.0046 -.0065	.0185 .0159	- 2.06 + 0.4	-.2029 .2336	.0266 .0207	.0909 .0942	-.0370 -.0378	-.0077 -.0061	+.0145 +.0127
2.20 + 1.734	.0271 .0271	-.0849 -.0849	.0359 .0359	-.0074 -.0074	.0157 .0157		+ 2.05 + 0.20	-.2446 -.2446	-.0135 -.0135	.0959 .0959	-.0405 -.0405	-.0051 -.0051	+.0115 +.0115
4.31 + 1.384	.0288 .0288	-.0839 -.0839	.0322 .0322	-.0052 -.0052	.0185 .0185		6.32 8.44	-.2437 .2097	-.0050 -.0054	.0993 .0937	-.0412 -.0382	-.0029 -.0002	+.0079 +.0030
6.44 + 1.643	.0395 .0395	-.0933 .0933	.0297 .0297	-.0107 -.0107	.0199 .0199		10.55 12.63	-.1731 .1459	-.0117 -.0169	.0769 .0668	-.0314 -.0256	-.0023 -.0029	+.0012 +.0010
8.55 + 1.407	.0508 .0508	-.0697 .0697	.0237 .0237	-.0133 -.0133	.0223 .0223		12.63 14.70	-.0129 .1235	-.0129 -.0191	.0668 .0513	-.0256 -.0200	-.0029 -.0034	+.0010 +.0027
10.65 + 0.968	.0494 .0494	-.0430 .0430	.0152 .0152	-.0135 -.0135	.0233 .0233		14.77 18.85	-.0128 .0567	-.0266 -.0176	.0497 .0220	-.0177 -.0180	-.0040 -.0050	+.0051 +.0070
12.72 + 0.784	.0476 .0476	-.0329 .0329	.0092 .0092	-.0125 -.0125	.0244 .0244								
14.77 + 0.630	.0486 .0486	-.0360 .0360	.0051 .0051	-.0113 -.0113	.0230 .0230								
16.85 + 0.415	.0478 .0478	-.0193 .0193	.0004 .0004	-.0095 -.0095	.0228 .0228								
18.90 + 0.722	.0558 .0558	-.0408 .0408	.0087 .0087	-.0112 -.0112	.0215 .0215								

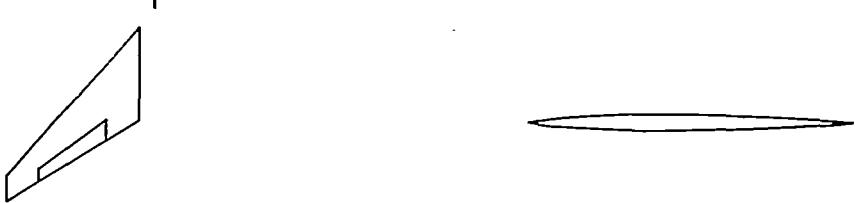


TABLE 7.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.25$ ;  $M = 0.90$

(a) Plain leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_Y$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_Y$
$\delta = 6.7$												$\delta = -5.1$	
- 2.11	.0455	.0004	-.0290	.0114	-.0000	.0025	- 2.12	-.0293	.0027	.0222	-.0114	+.0003	-.0022
.01	.0474	.0024	-.0310	.0119	-.0004	.0034	.02	-.0360	.0014	.0289	-.0114	+.0001	-.0007
2.14	.0476	.0037	-.0317	.0112	-.0008	.0034	2.17	-.0221	-.0010	.0249	-.0112	+.0002	-.0010
4.29	.0370	.0052	-.0292	.0101	-.0015	.0035	4.30	-.0230	-.0014	.0267	-.0109	+.0005	-.0001
6.41	.0273	.0076	-.0258	.0068	-.0020	.0043	6.43	-.0233	-.0016	.0228	-.0090	+.0012	-.0013
8.55	.0368	.0086	-.0251	.0015	-.0015	.0048	8.55	-.0232	.0012	.0041	.0110	-.0058	+.0019
10.65	.0171	.0047	-.0152	.0053	-.0019	.0042	10.66	-.0092	-.0001	.0199	-.0026	.0014	-.0015
12.71	.0361	.0121	-.0250	.0055	-.0020	.0036	12.73	-.0014	.0003	.0126	-.0054	.0018	-.0011
14.80	.0189	.0087	-.0196	.0051	-.0021	.0053	14.83	-.0126	.0023	.0052	-.0041	.0019	-.0009
$\delta = 12.0$												$\delta = -10.5$	
- 2.09	.1171	.0019	-.0505	.0200	-.0007	.0053	- 2.15	-.0448	.0074	.0153	-.0183	-.0015	.0024
.05	.1220	.0061	-.0534	.0201	-.0017	.0059	2.14	-.0685	.0015	.0480	-.0204	-.0012	.0053
2.19	.1150	.0094	-.0505	.0172	-.0023	.0065	4.29	-.0727	-.0014	.0498	-.0206	.0004	.0041
4.32	.0975	.0130	-.0478	.0153	-.0034	.0075	6.41	-.0684	-.0040	.0461	-.0180	.0012	.0030
6.44	.0784	.0184	-.0570	.0110	-.0043	.0075	8.55	-.0373	-.0009	.0278	-.0134	.0028	-.0000
8.57	.0799	.0230	-.0598	.0131	-.0035	.0078	10.67	-.0379	-.0053	.0358	-.0107	.0025	-.0003
10.68	.0476	.0144	-.0183	.0114	-.0040	.0068	12.74	-.0134	-.0018	.0244	-.0116	.0031	-.0003
12.75	.0862	.0271	-.0344	.0090	-.0044	.0071	14.81	-.0291	-.0074	.0249	-.0105	.0035	-.0006
14.81	.0460	.0189	-.0241	.0082	-.0046								
$\delta = 16.0$												$\delta = -14.5$	
- 2.07	.1502	.0048	-.0645	.0239	-.0016	.0085	- 2.15	-.0574	.0132	.0182	-.0221	-.0029	.0045
.06	.1483	.0100	-.0671	.0235	-.0028	.0092	2.14	-.0916	.0102	.0608	-.0247	-.0024	.0079
2.18	.1369	.0134	-.0656	.0204	-.0033	.0096	4.29	-.0999	.0057	.0662	-.0246	-.0014	.0070
4.32	.1172	.0174	-.0576	.0185	-.0045	.0108	6.41	-.0925	-.0026	.0652	-.0235	.0007	.0028
6.45	.0959	.0234	-.0446	.0135	-.0054	.0111	8.55	-.0746	-.0043	.0538	-.0191	.0027	.0015
8.58	.1025	.0301	-.0494	.0160	-.0051	.0112	10.66	-.0735	-.0101	.0592	-.0147	.0026	-.0005
10.59	-.0106	.0080	-.0358	.0148	-.0058	.0106	12.73	-.0439	-.0051	.0458	-.0166	.0033	-.0013
12.74	.0881	.0300	-.0375	.0106	-.0056	.0109	14.81	-.0417	-.0073	.0411	-.0150	.0040	-.0028
$\delta = 30.6$												$\delta = -29.3$	
- 2.05	.2195	.0199	-.0985	.0359	-.0060	.0174	- 2.00	-.1537	.0274	.0923	-.0344	-.0073	.0159
.16	.2778	.0263	-.0904	.0332	-.0070	.0195	2.11	-.1706	.0209	.0559	-.0370	-.0059	.0149
2.20	.1938	.0295	-.0914	.0306	-.0079	.0193	4.26	-.1893	.0124	.1075	-.0389	-.0042	.0127
4.33	.1679	.0359	-.0824	.0267	-.0097	.0215	6.40	-.1798	.0071	.1052	-.0388	-.0031	.0105
6.46	.1415	.0502	-.0664	.0199	-.0121	.0248	8.52	-.1384	-.0022	.0755	-.0284	.0012	.0047
8.60	.1409	.0569	-.0685	.0224	-.0120	.0247	10.65	-.0872	.0002	.0594	-.0206	.0013	.0009
10.69	.1172	.0530	-.0531	.0226	-.0126	.0230	12.71	-.0729	-.0022	.0551	-.0213	.0020	-.0008
12.75	.1320	.0583	-.0629	.0155	-.0125	.0235	14.81	-.0905	-.0137	.0647	-.0182	.0036	-.0029
14.81	.0901	.0525	-.0500	.0113	-.0116	.0242							



TABLE 7.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{V_1}{b/2} = 0.25$ ;  $H = 0.90$  - Concluded

(b) Modified leading edges

$\alpha_g$ deg	$\Delta\alpha_L$	$\Delta\alpha_D$	$\Delta\alpha_m$	$\Delta\alpha_t$	$\Delta\alpha_n$	$\Delta\alpha_Y$	$\alpha_g$ deg	$\Delta\alpha_L$	$\Delta\alpha_D$	$\Delta\alpha_m$	$\Delta\alpha_t$	$\Delta\alpha_n$	$\Delta\alpha_Y$
$\delta = 6.7$													
- 2.12 .03	.0557 .0677	-.0011 .0012	-.0261 .0274	.0106 .0113	.0002 -.0003	.0025 -.0000	- 2.15 .00	-.0546 .0540	.0020 .0004	.0324 .0297	-.0111 .0108	-.0007 .0003	-.0029 .0033
2.17 .30	.0467 .0460	.0092 .0056	-.0287 .0268	.0106 .0094	-.0008 .0015	.0006 .0012	2.15 4.30	-.0667 -.0442	-.0027 -.0037	.0356 .0346	-.0107 .0117	.0001 .0005	-.0035 .0035
4.30 .44	.0452 .0452	.0070 .0211	-.0211 .0086	.0016 .0025	-.0025 .0028	.0012 8.53	6.42 10.63	-.0442 -.0470	-.0055 -.0106	.0335 .0366	-.0110 .0067	.0014 .0015	-.0045 .0045
8.54 10.63	.0315 .0245	.0089 .0068	-.0161 .0102	.0076 .0049	-.0019 .0019	.0021 .0034	12.70 14.83	-.0115 -.0020	-.0017 -.0033	.0143 .0120	-.0054 .0035	.0018 .0014	-.0045 .0047
12.74 14.84	.0508 .0450	.0178 .0145	-.0110 .0119	-.0018 .0060	-.0023 -.0025	.0040 .0030	12.70 14.83	-.0115 -.0020	-.0017 -.0033	.0143 .0120	-.0054 .0035	.0018 .0014	-.0045 .0047
$\delta = 12.0$													
$\delta = -10.5$													
- 2.11 .04	.0994 .1042	.0008 .0049	-.0488 .0491	.0106 .0183	-.0002 -.0014	.0040 .0012	- 2.16 .02	-.1035 -.1061	.0094 .0059	.0558 .0524	-.0179 .0183	-.0021 .0016	-.0009 .0010
2.18 .43	.0847 .0735	.0081 .0112	-.0463 .0440	.0171 .0146	-.0020 -.0029	.0016 .0027	2.12 4.26	-.1263 -.1255	-.0016 -.0030	.0628 .0626	-.0195 .0209	.0001 .0001	-.0042 .0042
6.42 8.55	.0664 .0574	.0141 .0178	-.0434 .0249	.0136 .0095	-.0033 -.0041	.0038 .0044	6.40 8.50	-.1031 -.0963	-.0047 -.0120	.0564 .0484	-.0202 .0146	.0017 .0026	-.0065 .0085
10.65 12.74	.0607 .0533	.0230 .0238	-.0258 .0110	.0058 .0075	-.0046 -.0056	.0056 .0019	10.60 12.68	-.0712 -.0472	-.0114 -.0083	.0306 .0248	-.0106 .0120	.0024 .0029	-.0084 .0086
14.83	.0457	.0198	-.0184	.0091	-.0050	.0039	14.79	-.0543	-.0159	.0262	-.0012	.0023	-.0106
$\delta = 16.0$													
$\delta = -14.5$													
- 2.10 .05	.1246 .1264	.0038 .0089	-.0593 -.0606	.0235 .0222	-.0009 -.0024	.0081 .0059	- 2.18 .02	-.1369 -.1308	.0142 .0098	.0453 .0445	-.0224 -.0229	-.0035 -.0028	-.0047 .0046
2.18 .43	.0997 .0913	.0123 .0162	-.0550 -.0513	.0201 .0171	-.0030 -.0040	.0065 .0070	2.10 4.26	-.1611 -.1559	-.0048 -.0018	.0726 .0794	-.0243 -.0263	-.0019 -.0008	-.0033 .0015
6.43 8.55	.0878 .0681	.0217 .0230	-.0534 -.0297	.0152 .0131	-.0046 -.0054	.0083 .0094	6.40 8.51	-.1455 -.1327	-.0079 -.0150	.0824 .0724	-.0262 -.0225	-.0010 -.0028	-.0012 .0044
10.67 12.74	.0735 .0815	.0241 .0337	-.0292 -.0322	.0100 -.0044	-.0062 -.0059	.0100 .0114	10.61 12.68	-.0885 -.0751	-.0098 -.0096	.0452 .0421	-.0158 -.0175	-.0026 -.0029	-.0054 .0043
14.84	.0657	.0275	-.0253	.0066	-.0057	.0096	14.77	-.0794	-.0206	.0345	-.0150	.0038	-.0063
$\delta = 30.6$													
$\delta = -29.3$													
- 2.10 .05	.1763 .1734	.0161 .0235	-.0911 -.0905	.0354 .0331	-.0047 -.0067	.0173 .0158	- 2.18 2.08	-.1986 -.2352	.0262 .0208	.0911 .1029	-.0348 -.0373	-.0075 -.0063	-.0139 .0122
2.17 .43	.1269 .1289	.0266 .0318	-.0786 -.0765	.0310 .0272	-.0076 -.0089	.0157 .0179	4.23 6.36	-.2297 -.2318	-.0017 -.0017	.1105 .1146	-.0411 -.0416	-.0050 -.0020	-.0103 .0057
6.43 8.55	.1059 .1001	.0338 .0481	-.0673 -.0624	.0221 .0161	-.0100 -.0120	.0201 .0220	8.47 10.59	-.2044 -.1398	-.0093 -.0082	.0998 .0657	-.0358 -.0247	-.0010 -.0026	-.0005 .0036
10.66 12.76	.0919 .1101	.0509 .0582	-.0451 -.0366	.0152 .0164	-.0130 -.0132	.0236 .0252	12.66 14.75	-.1034 -.1065	-.0072 -.0021	.0523 .0386	-.0203 -.0182	-.0023 -.0029	-.0032 .0053

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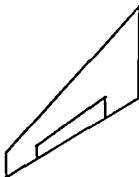


TABLE 8.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{T_1}{b/2} = 0.25$ ;  $M = 0.94$

## (a) Plain leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_a$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_a$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 6.7$							$\delta = -5.1$						
- 2.12 .00	.0476 .0544	-.0001 .0022	-.0312 .0363	.0116 .0116	-.0001 .0006	.0042 .0033	- 2.13 .03	-.0216 .0209	.0029 .0012	.0127 .0278	-.0102 .0115	-.0009 .0004	-.0004 .0009
2.13 4.26	.0390 .0222	.0045 .0043	-.0311 .0242	.0095 .0074	-.0011 .0016	.0040 .0042	2.16 4.30	-.0206 .0148	.0002 .0036	.0253 .0298	-.0109 .0110	-.0001 .0008	-.0012 .0000
6.39 8.52	.0157 .0139	.0058 .0050	-.0208 .0158	.0057 .0061	-.0019 .0020	.0041 .0044	6.42 8.53	-.0191 .0192	-.0023 .0040	.0223 .0189	-.0075 .0057	-.0012 .0012	-.0020 .0019
10.63	.0101	.0048	-.0221	.0075	-.0026	.0052	10.66	-.0347	-.0068	.0237	-.0070	.0018	-.0018
$\delta = 12.0$							$\delta = -10.5$						
- 2.09 .05	.1122 .1233	.0017 .0061	-.0569 .0566	.0197 .0185	-.0014 .0022	.0070 .0061	- 2.15 .02	-.0387 .0610	.0085 .0059	.0078 .0467	-.0167 .0192	-.0023 .0017	.0053 .0057
2.16 4.29	.0944 .0780	.0105 .0118	-.0475 .0390	.0149 .0127	-.0028 .0036	.0068 .0072	2.15 4.29	-.0543 .0518	-.0031 .0014	.0452 .0461	-.0191 .0189	-.0008 .0006	.0056 .0029
6.44 8.55	.0655 .0593	.0146 .0159	-.0242 .0248	.0096 .0110	-.0042 .0046	.0072 .0077	6.41 8.54	-.0519 .0539	-.0040 .0069	.0141 .0456	-.0159 .0122	-.0016 .0019	.0012 .0005
10.66	.0715	.0208	-.0433	.0117	-.0054	.0096	10.65	-.0618	-.0089	.0474	-.0147	.0028	-.0006
$\delta = 16.0$							$\delta = -14.5$						
- 2.09 .04	.1373 .1487	.0053 .0106	-.0714 .0705	.0234 .0218	-.0023 .0034	.0100 .0092	- 2.14 .02	-.0508 .0773	.0146 .0113	.0202 .0640	-.0201 .0235	-.0041 .0031	.0079 .0088
2.18 4.30	.1223 .0994	.0140 .0171	-.0606 .0502	.0181 .0154	-.0038 .0049	.0097 .0106	2.15 4.28	-.0963 .0775	-.0048 .0003	.0660 .0656	-.0243 .0241	-.0018 .0002	.0057 .0036
6.43 8.56	.0864 .0975	.0222 .0262	-.0412 .0466	.0123 .0137	-.0055 .0064	.0109 .0120	6.43 8.55	-.0693 .0687	-.0030 .0062	.0611 .0608	-.0211 .0165	-.0011 .0018	.0008 .0003
10.64	.1110	.0330	-.0820	.0142	-.0075	.0138	10.67	-.0743	-.0060	.0658	-.0225	.0027	-.0017
$\delta = 50.6$							$\delta = -29.5$						
- 2.07 .06	.2142 .2087	.0201 .0277	-.1062 .1030	.0348 .0312	-.0066 .0079	.0190 .0205	- 2.14 .01	-.1116 .1364	.0304 .0301	.0613 .0550	-.0297 .0346	-.0091 .0087	.0160 .0166
2.18 4.31	.1772 .1484	.0334 .0357	-.0933 .0754	.0292 .0243	-.0089 .0101	.0215 .0220	2.14 4.28	-.1579 .1540	.0191 .0111	.0127 .0173	-.0362 .0399	-.0063 .0040	.0151 .0105
6.75 8.54	.0416 .1471	.0808 .0557	-.0443 .0901	.0213 .0188	-.0123 .0147	.0254 .0270	6.42 8.54	-.1453 .1257	-.0055 .0024	.0999 .0912	-.0369 .0292	-.0023 .0001	.0068 .0017
10.66	.1560	.0671	-.1034	.0177	-.0166	.0320	10.66	-.1087	-.0024	.0777	-.0237	.0016	-.0027

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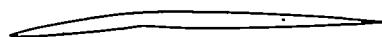
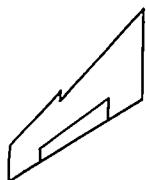


TABLE 8.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.25$ ;  $N = 0.94$  - Continued

(b) Modified leading edge

$\alpha_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 6.7$												$\delta = -5.1$	
- 2.12 .0558	-.0011	-.0304	.0114	.0003	.0026		- 2.13 -.0468	.0020	.0325	-.0105	-.0008	-.0028	
.02 .0621	.0021	-.0290	.0109	-.0005	.0002		-.00 -.0407	.0014	.0301	-.0104	-.0004	-.0028	
2.16 .0423	.0055	-.0252	.0084	-.0012	.0013		2.15 -.0460	-.0036	.0374	-.0108	-.0000	-.0033	
4.28 .0358	.0071	-.0394	.0067	-.0015	.0017		4.28 -.0471	-.0052	.0178	-.0110	.0010	-.0038	
6.41 .0371	.0048	-.0151	.0070	-.0016	.0037		6.41 -.0377	-.0064	.0341	-.0092	.0014	-.0041	
8.54 .0258	.0041	-.0045	.0051	-.0018	.0030		8.49 -.0368	-.0001	.0116	-.0078	.0019	-.0055	
10.61 .0300	.0081	-.0267	.0068	-.0026	.0035		10.62 -.0308	-.0063	.0172	-.0084	.0020	-.0050	
$\delta = 12.0$												$\delta = -10.5$	
- 2.12 .0908	.0014	-.0528	.0185	-.0006	.0029		- 2.15 -.0852	.0100	.0517	-.0160	-.0025	-.0002	
.03 .1037	.0058	-.0501	.0170	-.0016	.0013		-.00 -.0833	.0081	.0517	-.0166	-.0018	-.0020	
2.16 .0773	.0077	-.0415	.0144	-.0024	.0022		2.13 -.1001	.0013	.0591	-.0186	-.0010	-.0036	
4.29 .0641	.0119	-.0558	.0121	-.0030	.0034		4.26 -.1022	-.0022	.0447	-.0182	-.0006	-.0060	
6.41 .0651	.0105	-.0290	.0121	-.0033	.0045		6.38 -.0936	-.0070	.0578	-.0172	-.0016	-.0071	
8.51 .0552	.0168	-.0327	.0096	-.0040	.0047		8.49 -.0900	-.0121	.0482	-.0136	.0022	-.0090	
10.62 .0810	.0292	-.0620	.0098	-.0049	.0059		10.58 -.0986	-.0152	.0416	-.0148	.0029	-.0091	
$\delta = 16.0$												$\delta = -14.5$	
- 2.12 .1124	.0050	-.0644	.0223	-.0015	.0052		- 2.15 -.1073	.0150	.0624	-.0200	-.0039	.0054	
.03 .1208	.0107	-.0637	.0200	-.0028	.0067		-.01 -.1056	.0120	.0636	-.0212	-.0030	.0051	
2.16 .0983	.0132	-.0543	.0176	-.0036	.0072		2.12 -.1161	.0076	.0667	-.0222	-.0019	.0028	
4.29 .0771	.0150	-.0602	.0150	-.0039	.0077		4.25 -.1214	.0049	.0516	-.0220	-.0001	.0002	
6.39 .0755	.0222	-.0450	.0138	-.0050	.0102		6.38 -.1148	-.0073	.0717	-.0223	.0012	-.0021	
8.52 .0616	.0202	-.0322	.0132	-.0054	.0105		8.50 -.1047	-.0092	.0578	-.0154	.0019	-.0042	
10.62 .1085	.0340	-.0804	.0116	-.0069	.0122		10.62 -.1170	-.0153	.0711	-.0181	.0024	-.0053	
$\delta = 30.6$												$\delta = -29.3$	
- 2.12 .1672	.0169	-.0975	.0341	-.0050	.0173		-.05 -.1811	.0275	.0930	-.0331	-.0077	.0142	
.02 .1677	.0253	-.0949	.0321	-.0072	.0174		2.10 -.2040	.0204	.1081	-.0370	-.0066	.0127	
2.16 .1433	.0287	-.0840	.0290	-.0083	.0184		4.25 -.1989	.0154	.0933	-.0403	-.0039	.0086	
4.29 .1139	.0326	-.0832	.0254	-.0093	.0194		6.37 -.1770	.0047	.1024	-.0373	-.0008	.0031	
6.39 .1095	.0407	-.0698	.0251	-.0113	.0237		8.48 -.1667	-.0042	.0935	-.0324	.0019	-.0018	
8.54 .0759	.0375	-.0355	.0146	-.0115	.0223		10.58 -.1414	-.0063	.0705	-.0265	.0022	-.0045	
10.64 .1331	.0576	-.0830	.0168	-.0149	.0282								



TABLE 9.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.50$ ;  $M = 0.40$

(a) Plain leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_Y$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_Y$					
$S = 3.5$												$S = -6.6$						
- 2.04	.0173	.0003	-.0105	.0052	-.0002	-.0029	- 2.05	-.0315	.0016	-.0081	-.0090	-.0008	-.0077					
.01	.0281	.0007	-.0129	.0050	-.0005	-.0038	- 2.06	-.0311	.0008	-.0081	-.0098	-.0007	-.0086					
2.05	.0154	.0003	-.0141	.0049	-.0005	-.0012	2.07	-.0350	-.0014	-.0085	-.0094	-.0005	-.0077					
4.11	.0127	.0010	-.0085	.0050	-.0004	-.0012	4.10	-.0441	-.0029	-.0062	-.0098	-.0001	-.0078					
6.17	.0082	.0009	-.0115	.0052	-.0008	.0006	6.15	-.0401	-.0045	-.0269	-.0085	.0002	-.0066					
8.24	.0066	.0002	-.0095	.0049	-.0006	.0014	8.23	-.0197	-.0036	-.0135	-.0078	.0002	-.0045					
10.29	.0177	.0027	-.0116	.0068	-.0011	.0034	10.29	-.0103	-.0025	-.0157	-.0075	.0012	-.0042					
12.36	.0219	.0031	-.0065	.0038	-.0011	.0040	12.34	-.0204	-.0063	-.0149	-.0063	.0012	-.0031					
14.40	.0145	.0032	-.0048	.0022	-.0012	.0001	14.38	-.0189	-.0063	-.0156	-.0057	.0013	-.0039					
16.45	.0224	.0025	-.0047	.0030	-.0013	.0002	16.42	-.0357	-.0166	-.0178	-.0050	.0014	-.0049					
18.48	-.0009	.0000	-.0058	.0027	-.0013	.0026	18.46	-.0305	-.0112	-.0144	-.0053	.0019	-.0039					
20.48	.0134	.0199	.0035	.0023	-.0017	.0044	20.47	-.0254	-.0044	-.0167	-.0049	.0012	-.0031					
23.50	.0170	.0234	.0032	.0014	-.0007	.0012	23.48	.0411	.0013	-.0146	-.0046	.0015	-.0074					
$S = 7.7$																		
- 2.06	.0215	.0011	-.0435	.0117	-.0006	-.0032	- 2.29	-.5167	.0201	-.0189	-.0167	-.0012	-.0113					
.01	.0383	.0016	-.0334	.0119	-.0008	.0014	- 2.01	-.0410	.0015	.0147	-.0170	-.0009	-.0123					
2.06	.0341	.0020	-.0489	.0119	-.0010	.0041	2.05	-.0479	-.0013	.0146	-.0162	-.0010	-.0163					
4.11	.0409	.0037	-.0457	.0119	-.0014	.0040	4.11	-.0369	-.0027	.0146	-.0166	.0001	-.0059					
6.17	.0317	.0041	-.0149	.0107	-.0014	.0057	6.16	-.0405	-.0042	-.0109	-.0134	.0002	-.0047					
8.23	.0344	.0045	-.0447	.0101	-.0014	.0083	8.24	-.0234	-.0041	-.0229	-.0123	.0012	-.0033					
10.29	.0503	.0088	-.0484	.0115	-.0021	.0076	10.28	-.0267	-.0055	-.0048	-.0120	.0021	-.0020					
12.34	.0365	.0082	-.0357	.0085	-.0028	.0059	12.33	-.0361	-.0093	-.0018	-.0096	.0024	-.0032					
14.39	.0149	.0046	-.0351	.0060	-.0028	.0045	14.37	-.0578	-.0154	-.0067	-.0099	.0031	-.0019					
16.43	.0261	.0040	-.0350	.0066	-.0031	.0046	16.43	-.0356	-.0161	-.0166	-.0084	.0031	-.0004					
18.47	-.0043	.0001	-.0284	.0060	-.0032	.0052	18.45	-.0626	-.0199	-.0044	-.0094	.0039	-.0003					
20.48	.0433	.0335	-.0272	.0054	-.0038	.0062	20.46	-.0308	-.0045	-.0162	-.0074	.0025	-.0039					
23.48	.0182	.0252	-.0332	.0032	-.0042	.0016	23.47	-.0363	-.0007	-.0064	-.0061	.0027	-.0084					
$S = 13.2$																		
- 2.04	.0570	.0023	-.0621	.0207	-.0014	-.0025	- 2.06	-.0420	.0060	.0322	-.0219	-.0023	-.0095					
.01	.0628	.0041	-.0679	.0209	-.0021	-.0051	- 2.00	-.0495	.0043	.0357	-.0233	-.0023	-.0125					
2.05	.0598	.0046	-.0623	.0200	-.0023	-.0015	2.06	-.0565	.0012	.0324	-.0230	-.0020	-.0084					
4.11	.0569	.0069	-.0597	.0198	-.0030	-.0026	8.23	-.0412	-.0060	.0152	-.0181	.0010	-.0032					
6.17	.0520	.0084	-.0812	.0184	-.0036	-.0011	10.29	-.0351	-.0053	.0186	-.0167	.0024	-.0027					
8.22	.0405	.0074	-.0645	.0165	-.0037	-.0012	12.33	-.0397	-.0091	.0130	-.0139	.0029	-.0038					
10.29	.0471	.0107	-.0579	.0176	-.0045	-.0003	14.38	-.0332	-.0085	.0068	-.0139	.0037	-.0036					
12.34	.0360	.0110	-.0418	.0133	-.0054	-.0024	16.42	-.0393	-.0161	.0083	-.0123	.0037	-.0025					
14.39	.0848	.0126	-.0397	.0104	-.0055	-.0047	18.44	-.0888	-.0264	.0065	-.0131	.0047	-.0029					
16.43	.0273	.0072	-.0410	.0109	-.0060	-.0048	20.44	-.0718	-.0030	.0093	-.0107	.0038	-.0009					
18.47	.0150	.0090	-.0360	.0105	-.0063	-.0041	23.45	-.0927	-.00240	.0026	-.0092	.0043	-.0081					
20.46	.0151	.0247	-.0328	.0084	-.0070	-.0036	$S = 15.2$											
23.49	.0037	.0215	-.0044	.0074	-.0069	-.0064	- 2.06	-.1022	.0193	.0732	-.0392	-.0088	.0042					
$S = 28.2$																		
- 2.04	.1281	.0124	-.0898	.0397	-.0079	-.0183	- 2.02	-.1111	.0172	.0803	-.0434	-.0086	-.0020					
.02	.1318	.0245	-.0894	.0377	-.0085	-.0184	2.04	-.1244	.0135	.0820	-.0459	-.0081	.0066					
2.08	.1221	.0180	-.0842	.0359	-.0092	-.0159	4.10	-.1149	.0096	.0807	-.0455	-.0062	.0084					
4.18	.1338	.0225	-.0768	.0293	-.0114	-.0143	6.17	-.1166	.0023	.0513	-.0418	-.0035	.0130					
6.19	.1152	.0244	-.1056	.0352	-.0106	-.0167	8.22	-.0920	-.0041	.0524	-.0364	-.0007	.0107					
8.25	.1018	.0250	-.0768	.0285	-.0122	-.0163	10.28	-.0788	-.0061	.0449	-.0308	.0024	.0099					
12.35	.0722	.0271	-.0534	.0236	-.0132	-.0156	12.34	-.0612	-.0077	.0382	-.0269	.0036	.0081					
14.38	.0511	.0258	-.0735	.0169	-.0128	-.0181	14.38	-.0607	-.0101	.0279	-.0266	.0051	.0073					
16.44	.0357	.0195	-.0427	.0170	-.0137	-.0185	16.42	-.0768	-.0217	.0294	-.0244	.0058	.0076					
18.46	-.0091	.0207	-.0373	.0159	-.0143	-.0190	18.44	-.1224	.0319	.0257	-.0250	.0075	.0072					
20.48	.0358	.0406	-.0422	.0144	-.0161	-.0212	20.47	-.0563	.0049	.0148	-.0233	.0082	.0104					
23.50	.0256	.0547	-.0381	.0116	-.0166	-.0259	23.48	-.0740	-.0111	.0258	-.0196	.0086	.0137					



TABLE 9.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.30$ ;  $H = 0.40$  - Concluded

## (b) Modified leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 3.5$							$\delta = -6.6$						
- 2.05	.0487	-.0020	.0066	.0057	.0002	.0053	- 2.08	-.0070	.0004	.0237	-.0095	-.0004	.0058
- .01	.0299	-.0001	-.0011	.0053	-.0000	.0052	- .02	-.0145	.0002	.0351	-.0092	-.0000	.0076
2.04	.0413	.0010	.0057	.0059	-.0003	.0053	2.04	-.0125	-.0000	.0319	-.0090	-.0002	.0048
4.11	.0327	.0017	.0079	.0054	-.0002	.0044	4.10	-.0210	-.0004	.0311	-.0094	-.0005	.0041
6.16	.0346	.0039	.0169	.0052	-.0007	.0076	6.15	-.0133	-.0001	.0435	-.0095	-.0003	.0074
8.23	.0385	.0049	-.0039	.0053	-.0006	.0061	8.20	-.0235	-.0022	.0154	-.0093	-.0009	.0068
10.28	.0221	.0033	.0156	.0043	-.0009	.0039	10.26	-.0247	-.0043	.0360	-.0085	-.0012	.0051
12.33	.0497	.0097	.0027	.0023	-.0010	-.0016	12.33	-.0236	.0040	.0306	-.0090	.0011	.0007
14.37	.0326	.0088	.0168	.0033	-.0013	.0037	14.36	-.0035	-.0006	.0284	-.0058	.0014	.0065
16.43	.0426	.0118	.0140	.0031	-.0016	.0044	16.41	-.0061	.0014	.0199	-.0052	.0019	.0104
18.46	.0288	.0103	.0159	.0031	-.0017	.0044	18.45	-.0018	.0006	.0283	-.0054	.0020	.0076
20.49	.0159	.0068	.0209	.0022	-.0014	.0042	20.47	-.0190	-.0066	.0269	-.0042	.0026	.0097
23.51	.0326	.0149	.0106	.0032	-.0018	.0025	23.50	-.0084	.0019	.0204	-.0038	.0025	.0070
$\delta = 7.7$							$\delta = -10.3$						
- 2.05	.0439	-.0008	-.0092	.0117	-.0000	.0086	- 2.05	.0072	.0013	.0508	-.0158	-.0021	-.0042
- .00	.0644	.0005	.0171	.0114	-.0005	.0086	- .01	-.0087	.0017	.0461	-.0158	-.0012	-.0039
2.06	.0629	.0031	-.0084	.0120	-.0012	.0067	2.05	-.0090	.0004	.0538	-.0157	-.0011	-.0060
4.12	.0498	.0038	-.0127	.0114	-.0012	.0067	4.10	-.0108	-.0021	.0464	-.0159	-.0005	-.0030
6.17	.0625	.0073	-.0000	.0108	-.0018	.0091	6.16	-.0200	-.0042	.0594	-.0159	-.0000	-.0008
8.22	.0435	.0078	-.0197	.0102	-.0018	.0090	8.21	-.0140	-.0035	.0357	-.0147	.0010	-.0001
10.28	.0278	.0065	.0028	.0087	-.0019	.0069	10.29	-.0186	-.0048	.0494	-.0123	.0016	-.0019
12.33	.0385	.0083	.0006	.0051	-.0024	-.0001	12.32	-.0158	-.0036	.0429	-.0120	.0024	-.0077
14.37	.0451	.0129	.0039	.0070	-.0029	.0055	14.37	-.0067	-.0028	.0465	-.0087	.0026	-.0030
16.42	.0650	.0194	.0023	.0068	-.0033	.0071	16.41	-.0036	-.0024	.0385	-.0081	.0031	-.0005
18.46	.0467	.0181	-.0023	.0066	-.0038	.0052	18.45	-.0195	-.0036	.0393	-.0074	.0041	-.0009
20.49	.0209	.0110	.0169	.0043	-.0032	.0048	20.47	-.0399	-.0074	.0347	-.0054	.0046	.0031
23.51	.0419	.0208	.0011	.0064	-.0040	.0023	23.49	-.0325	-.0118	.0337	-.0037	.0040	.0150
$\delta = 13.2$							$\delta = -15.2$						
- 2.06	.0798	-.0016	-.0249	.0205	-.0006	.0112	- 2.06	-.0317	.0043	.0553	-.0220	-.0034	.0058
- .00	.0670	.0022	-.0261	.0203	-.0014	.0110	- .03	-.0371	.0032	.0570	-.0223	-.0022	.0074
2.05	.0791	.0042	-.0225	.0209	-.0023	.0109	2.03	-.0557	.0007	.0617	-.0225	-.0019	.0059
4.11	.0510	.0052	-.0278	.0193	-.0025	.0098	4.09	-.0612	-.0019	.0568	-.0229	-.0011	.0069
6.17	.0683	.0068	-.0147	.0190	-.0034	.0122	6.14	-.0509	-.0030	.0683	-.0227	-.0005	.0118
8.22	.0491	.0083	-.0345	.0180	-.0038	.0102	8.21	-.0531	-.0051	.0466	-.0209	-.0009	.0114
10.28	.0525	.0096	-.0135	.0167	-.0044	.0090	10.27	-.0519	-.0068	.0642	-.0178	.0018	.0098
12.34	.0722	.0156	.0120	.0118	-.0052	-.0000	12.31	-.0337	-.0066	.0592	-.0160	-.0027	.0058
14.36	.0402	.0133	-.0055	.0120	-.0054	.0053	14.36	-.0433	-.0084	.0559	-.0126	.0033	.0079
16.42	.0659	.0167	-.0068	.0115	-.0061	.0068	16.48	-.0578	-.0135	.0478	-.0114	.0040	.0117
18.47	.0840	.0310	.0009	.0099	-.0067	.0047	18.43	-.0498	-.0102	.0490	-.0109	.0051	.0132
20.49	.0250	.0134	.0083	.0070	-.0061	.0041	20.46	-.0697	-.0157	.0422	-.0083	.0059	.0156
23.50	.0288	.0173	.0004	.0113	-.0025	.0051	23.49	-.0398	-.0144	.0390	-.0071	.0060	.0253
$\delta = 28.2$							$\delta = -31.3$						
- 2.05	.1341	.0095	-.0943	.0417	-.0066	-.0007	- 2.06	-.0794	.0180	.1044	-.0417	-.0104	.0100
- .01	.1546	.0147	-.0890	.0390	-.0084	-.0013	- .03	-.0805	.0160	.1015	-.0416	-.0086	.0131
2.07	.1462	.0184	-.0785	.0378	-.0092	-.0016	2.03	-.0802	.0130	.1098	-.0425	-.0076	.0118
4.13	.1365	.0211	-.0824	.0359	-.0096	-.0007	4.09	-.0952	.0102	.1063	-.0445	-.0066	.0124
6.18	.1394	.0254	-.0582	.0348	-.0109	-.0006	6.16	-.0805	.0082	.1196	-.0457	-.0050	.0200
8.23	.1228	.0272	-.0897	.0329	-.0114	-.0004	8.22	-.0786	.0042	.0947	-.0437	-.0025	.0199
10.28	.1059	.0272	.0611	.0289	-.0116	-.0028	10.27	-.0854	.0392	.1001	-.0376	-.0000	.0169
12.34	.1151	.0339	-.0572	.0223	-.0125	-.00102	12.32	-.0521	.0003	.0846	-.0317	.0026	.0104
14.38	.0874	.0341	-.0443	.0205	-.0132	-.0071	14.36	-.0610	-.0068	.0809	-.0277	.0038	.0115
16.43	.1019	.0409	-.0402	.0183	-.0139	-.0068	16.42	-.0385	-.0047	.0780	-.0274	.0058	.0132
18.47	.0970	.0451	-.0314	.0151	-.0143	-.0083	18.45	-.0588	-.0082	.0747	-.0273	.0076	.0146
20.49	.0420	.0303	-.0145	.0092	-.0133	-.0119	20.46	-.0924	-.0190	.0683	-.0241	.0096	.0174
23.50	.0620	.0413	-.0335	.0137	-.0151	-.0113	23.49	-.0402	-.0133	.0497	-.0131	.0095	.0228

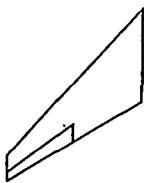
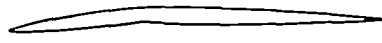
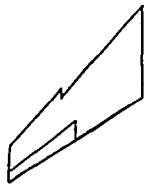


TABLE 10.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{y_1}{b/2} = 0.90$ ;  $M = 0.60$

(a) Plain leading edge

$\alpha$ deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$	$\alpha_c$ deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$
$b = 3.3$												$b = -6.6$	
-2.08	.0165	-.0025	-.0032	.0047	-.0002	-.0008	-2.09	-.0295	-.0009	.0235	-.0095	-.0006	-.0047
-0.01	.0159	.0004	-.0019	.0049	-.0004	.0005	-0.00	-.0269	.0006	.0207	-.0098	-.0006	-.0034
2.09	.0152	.0002	-.0038	.0048	-.0005	-.0001	2.08	-.0314	-.0008	.0158	-.0097	-.0005	-.0048
4.18	.0055	.0012	.0104	.0048	-.0008	-.0008	4.17	-.0426	.0013	.0103	-.0097	-.0003	-.0058
6.26	.0072	.0001	-.0020	.0046	-.0009	-.0012	6.26	-.0351	-.0033	.0183	-.0083	.0001	-.0053
8.35	.0091	.0015	-.0035	.0074	-.0010	-.0008	8.36	-.0179	-.0021	.0136	-.0060	-.0000	-.0063
10.44	.0123	.0053	.0013	.0048	-.0018	-.0022	10.44	-.0260	-.0038	.0145	-.0056	.0006	-.0058
12.52	.0081	.0037	.0021	-.0019	-.0000	-.0022	12.51	-.0282	-.0050	.0151	-.0053	.0009	-.0052
14.60	.0106	.0058	.0017	.0031	-.0015	-.0021	14.59	-.0314	-.0056	.0098	-.0056	.0011	-.0058
16.68	.0236	.0062	-.0004	.0030	-.0013	-.0020	16.63	-.0207	-.0073	.0076	-.0052	.0012	-.0067
18.67	.0029	.0003	.0022	.0039	-.0022	-.0035	18.65	-.0274	-.0107	.0113	-.0042	.0007	-.0085
20.67	.0261	.0062	.0055	.0032	-.0023	-.0045	20.64	-.0156	-.0114	.0121	-.0045	.0007	-.0100
23.71	.0228	.0038	.0033	.0036	-.0037	-.0077	23.71	-.0105	-.0122	.0140	-.0050	.0010	-.0095
$b = 7.7$												$b = -10.3$	
-2.08	.0309	-.0021	-.0298	.0113	-.0005	.0022	-2.08	-.0271	.0003	.0372	-.0163	-.0010	-.0045
-0.01	.0325	.0012	-.0359	.0117	-.0009	.0021	-0.01	-.0303	.0015	.0326	-.0169	-.0010	-.0046
2.09	.0398	.0017	-.0280	.0113	-.0010	.0033	2.10	-.0158	-.0004	.0309	-.0162	-.0007	-.0039
4.17	-.0327	.0038	-.0367	.0110	-.0015	.0025	4.19	-.0209	-.0003	.0212	-.0159	-.0001	-.0028
6.25	.0270	.0030	-.0267	.0104	-.0018	.0020	6.27	-.0111	-.0003	.0272	-.0134	-.0002	-.0028
8.35	.0315	.0053	-.0265	.0116	-.0023	.0011	8.37	-.0137	-.0019	.0260	-.0109	.0005	-.0025
10.44	.0205	.0063	-.0212	.0096	-.0033	-.0022	10.45	-.0330	-.0044	.0324	-.0120	.0021	-.0031
12.52	.0299	.0094	.0164	.0069	-.0029	-.0014	12.52	-.0203	-.0027	.0278	-.0093	.0022	-.0024
14.60	.0239	.0102	.0173	.0073	-.0033	-.0014	14.58	-.0408	-.0069	.0211	-.0088	.0025	-.0022
16.63	.0231	.0073	.0190	.0069	-.0034	-.0024	16.64	-.0315	-.0088	.0210	-.0084	.0028	-.0021
18.66	.0208	.0073	.0149	.0073	-.0044	-.0038	18.62	-.0589	-.0164	.0061	-.0084	.0028	-.0013
20.64	.0246	.0063	-.0164	.0057	-.0042	-.0044	20.64	-.0215	-.0116	.0161	-.0069	.0020	-.0007
23.71	.0313	.0091	-.0116	.0061	-.0061	-.0078	23.69	-.0225	-.0167	.0207	-.0053	.0009	.0132
$b = 13.2$												$b = -15.2$	
-2.08	.0645	-.0003	-.0473	.0199	-.0017	-.0018	-2.07	-.0427	.0038	.0598	-.0210	-.0024	-.0065
-0.00	.0640	-.0038	-.0491	.0203	-.0022	-.0010	-0.02	-.0481	.0051	.0587	-.0228	-.0023	-.0075
2.08	.0607	.0045	-.0496	.0191	-.0025	-.0012	2.10	-.0409	.0023	.0572	-.0224	-.0018	-.0060
4.17	-.0683	.0075	-.0574	.0196	-.0035	-.0031	4.18	-.0506	.0010	.0474	-.0221	-.0009	-.0055
6.26	.0560	.0082	-.0416	.0180	-.0039	-.0037	6.28	-.0479	.0017	.0528	-.0186	-.0004	-.0065
8.35	.0554	.0109	-.0433	.0169	-.0049	-.0075	8.37	-.0315	.0012	.0483	-.0142	.0008	-.0074
10.46	.0688	.0171	-.0331	.0161	-.0062	-.0088	10.46	-.0433	.0043	.0517	-.0159	.0022	-.0089
12.53	.0444	.0133	-.0247	.0110	-.0054	-.0083	12.53	-.0427	-.0052	.0443	-.0130	.0026	-.0081
14.60	.0316	.0144	-.0247	.0117	-.0062	-.0097	14.62	-.0132	.0018	.0416	-.0124	.0031	-.0075
16.64	.0378	.0141	-.0273	.0117	-.0066	-.0103	16.64	-.0417	-.0105	.0384	-.0122	.0037	-.0083
18.66	.0354	.0147	-.0232	.0112	-.0080	-.0138	18.63	-.0628	-.0157	.0241	-.0126	.0047	-.0065
20.66	.0523	.0195	-.0221	.0088	-.0075	-.0143	20.64	-.0320	-.0136	.0343	-.0109	.0036	-.0066
23.70	.0375	.0146	-.0236	.0083	-.0088	-.0149	23.70	-.0248	-.0148	.0378	-.0102	.0038	-.0030
$b = 28.2$												$b = -31.3$	
-2.08	.1141	.0105	-.0801	.0365	-.0081	-.0140	-2.07	-.0919	.0174	.0919	-.0380	-.0093	.0052
-0.01	.1254	.0159	-.0853	.0362	-.0089	-.0137	-0.02	-.0919	.0166	.0871	-.0394	-.0084	.0092
2.09	.1178	.0177	-.0828	.0344	-.0095	-.0158	2.10	-.0978	.0139	.0902	-.0411	-.0083	.0095
4.18	.1080	.0218	-.0909	.0337	-.0108	-.0167	4.18	-.1097	.0101	.0813	-.0412	-.0062	.0117
6.27	.1156	.0241	-.0771	.0330	-.0117	-.0178	6.27	-.0906	.0051	.0840	-.0377	-.0040	.0098
8.38	.1081	.0267	-.0655	.0299	-.0121	-.0193	8.37	-.0672	.0012	.0647	-.0292	-.0011	.0050
10.47	.0940	.0309	-.0530	.0285	-.0144	-.0235	10.45	-.0804	-.0070	.0654	-.0277	-.0015	.0026
12.54	.0651	.0288	-.0374	.0193	-.0129	-.0227	12.51	-.0809	-.0085	.0586	-.0249	-.0027	.0017
14.63	.0790	.0366	-.0384	.0200	-.0145	-.0248	14.59	-.0877	-.0123	.0537	-.0241	-.0035	.0015
16.66	.0827	.0340	-.0374	.0195	-.0155	-.0261	16.64	-.0746	-.0106	.0543	-.0247	-.0046	.0012
18.68	.0627	.0332	-.0384	.0193	-.0178	-.0317	18.64	-.0851	-.0153	.0421	-.0255	-.0064	-.0001
20.67	.0770	.0409	-.0401	.0143	-.0167	-.0307	20.65	-.0614	-.0160	.0533	-.0242	-.0060	.0030
23.71	.0583	.0342	-.0341	.0116	-.0171	-.0298	23.69	-.0748	-.0278	.0590	-.0209	.0044	.0150

TABLE 10.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.50$ ;  $M = 0.60$  - Concluded

## (b) Modified leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$
$\delta = 3.3$												$\delta = -6.6$	
- 2.09	.0351	-.0015	.0026	.0050	-.0000	.0021	- 2.11	-.0260	.0015	.0212	-.0096	-.0006	.0010
- .00	.0257	-.0000	-.0012	.0052	-.0002	.0052	- .02	-.0270	.0003	.0256	-.0094	-.0003	.0044
2.08	.0262	.0007	.0018	.0053	-.0002	.0030	2.05	-.0232	-.0006	.0319	-.0096	-.0001	.0009
4.17	.0319	.0014	.0067	.0055	-.0004	.0029	4.17	-.0172	-.0008	.0337	-.0096	.0002	.0009
6.26	.0369	.0034	.0025	.0055	-.0006	.0028	6.25	-.0191	-.0011	.0289	-.0094	.0007	.0025
8.34	.0202	.0024	.0012	.0052	-.0007	.0026	8.34	-.0251	-.0026	.0282	-.0087	.0009	.0026
10.44	.0050	.0022	-.0077	.0040	-.0008	.0024	10.41	-.0424	-.0052	.0115	-.0081	.0013	.0033
12.49	.0328	.0072	.0066	.0036	-.0010	.0015	12.49	-.0180	-.0037	.0254	-.0056	.0012	.0041
14.56	-.0026	.0006	.0053	.0033	-.0013	.0011	14.56	-.0249	-.0052	.0233	-.0061	.0017	.0032
16.62	.0233	.0082	.0059	.0034	-.0015	.0012	16.61	-.0104	-.0009	.0229	-.0058	.0021	.0044
18.66	-.0002	.0016	.0024	.0027	-.0016	.0006	18.65	-.0170	-.0040	.0222	-.0059	.0024	.0054
20.69	.0186	.0087	.0116	.0016	-.0015	.0005	20.68	-.0055	-.0004	.0248	-.0048	.0031	.0058
23.71	.0094	.0049	.0048	.0027	-.0019	.0005	23.70	-.0157	-.0059	.0194	-.0049	.0027	.0046
$\delta = 7.7$												$\delta = -10.3$	
- 2.10	.0421	-.0008	-.0124	.0107	-.0000	.0082	- 2.08	-.0023	.0001	.0436	-.0159	-.0021	.0005
- .01	.0383	.0012	-.0237	.0111	-.0006	.0072	- .01	-.0194	.0011	.0354	-.0158	-.0012	-.0010
2.08	.0498	.0021	-.0215	.0117	-.0009	.0054	2.09	-.0062	-.0002	.0413	-.0156	-.0008	-.0021
4.16	.0464	.0035	-.0190	.0114	-.0012	.0047	4.17	-.0079	-.0021	.0417	-.0157	-.0001	-.0012
6.24	.0503	.0055	-.0203	.0114	-.0015	.0046	6.26	-.0073	-.0028	.0388	-.0152	-.0007	-.0001
8.34	.0444	.0066	-.0210	.0105	-.0019	.0039	8.34	-.0120	-.0026	.0344	-.0133	.0014	-.0006
10.43	.0154	.0046	-.0311	.0087	-.0018	.0044	10.44	-.0321	-.0040	.0181	-.0114	.0020	-.0003
12.49	.0257	.0066	-.0059	.0081	-.0024	.0023	12.50	-.0224	-.0001	.0380	-.0066	.0027	-.0027
14.55	.0120	.0055	-.0102	.0069	-.0027	.0019	14.56	-.0517	-.0111	.0320	-.0087	.0031	-.0010
16.61	.0295	.0115	-.0042	.0068	-.0032	.0014	16.60	-.0584	-.0084	.0347	-.0084	.0037	-.0007
18.65	.0068	.0050	-.0061	.0056	-.0036	.0001	18.65	-.0451	-.0112	.0299	-.0082	.0047	-.0021
20.69	.0353	.0157	.0085	.0031	-.0032	-.0005	20.68	-.0261	-.0043	.0315	-.0072	.0060	-.0070
23.71	.0321	.0160	-.0037	.0054	-.0042	-.0000	23.71	-.0315	-.0119	.0343	-.0051	.0045	-.0229
$\delta = 13.2$												$\delta = -15.2$	
- 2.10	.0613	-.0003	-.0296	.0193	-.0008	.0048	- 2.08	-.0241	.0031	.0569	-.0216	-.0033	.0049
- .01	.0576	.0027	-.0362	.0197	-.0017	.0064	- .01	-.0451	.0051	.0524	-.0215	-.0021	.0081
2.07	.0664	.0042	-.0327	.0200	-.0024	.0040	2.07	-.0436	.0010	.0541	-.0217	-.0016	.0049
4.15	.0597	.0054	-.0334	.0186	-.0027	.0036	4.17	-.0373	-.0017	.0560	-.0218	-.0007	.0066
6.25	.0659	.0080	-.0346	.0190	-.0034	.0033	6.27	-.0316	-.0031	.0524	-.0215	.0005	.0085
8.34	.0575	.0093	-.0308	.0179	-.0040	.0025	8.34	-.0400	-.0044	.0467	-.0189	.0012	.0074
10.42	.0351	.0082	-.0405	.0155	-.0043	.0020	10.43	-.0524	-.0042	.0306	-.0158	.0022	.0081
12.50	.0525	.0130	-.0161	.0143	-.0050	-.0002	12.50	-.0469	-.0035	.0476	-.0104	.0031	.0099
14.55	.0171	.0083	-.0158	.0119	-.0056	-.0019	14.55	-.0619	-.0122	.0391	-.0128	.0037	.0084
16.61	.0506	.0190	-.0147	.0115	-.0064	-.0029	16.60	-.0554	-.0118	.0423	-.0123	.0047	.0082
18.65	.0160	.0094	-.0130	.0093	-.0067	-.0039	18.64	-.0800	-.0203	.0388	-.0123	.0060	.0082
20.69	.0330	.0163	.0069	.0057	-.0063	-.0052	20.66	-.0517	-.0120	.0361	-.0113	.0077	.0128
23.71	.0274	.0164	-.0087	.0087	-.0080	-.0057	23.70	-.0448	-.0161	.0407	-.0068	.0057	-.0205
$\delta = 28.2$												$\delta = -3L.3$	
- 2.10	.1220	.0085	-.0687	.0365	-.0063	-.0029	- 2.09	-.0891	.0185	.0971	-.0396	-.0106	.0136
- .00	.1204	.0144	-.0797	.0364	-.0086	-.0066	- .01	-.0934	.0165	.0884	-.0375	-.0088	.0154
2.08	.1328	.0177	-.0743	.0351	-.0094	-.0100	2.08	-.0922	.0132	.0948	-.0398	-.0077	.0122
4.17	.1281	.0204	-.0716	.0339	-.0101	-.0100	4.17	-.0882	.0100	.0991	-.0412	-.0066	.0145
6.25	.1234	.0240	-.0751	.0334	-.0112	-.0109	6.25	-.0850	.0065	.0960	-.0411	-.0046	.0167
8.34	.1087	.0248	-.0748	.0314	-.0116	-.0122	8.35	-.0871	.0031	.0872	-.0383	-.0024	.0164
10.41	.0759	.0235	-.0804	.0272	-.0117	-.0114	10.45	-.0716	.0022	.0635	-.0319	-.0003	.0146
12.50	.0998	.0302	-.0479	.0241	-.0125	-.0135	12.50	-.0690	-.0004	.0760	-.0245	-.0025	.0153
14.58	.0825	.0326	-.0461	.0204	-.0136	-.0159	14.55	-.1049	-.0161	.0679	-.0266	-.0039	.0119
16.76	.0846	.0366	-.0178	.0141	-.0181		16.61	-.0844	-.0134	.0708	-.0264	-.0054	.0106
18.81	.0723	.0359	-.0134	.0142	-.0205		18.65	-.0957	-.0185	.0670	-.0279	-.0079	.0109
20.70	.0568	.0388	-.0079	.0040	-.0135	-.0254	20.66	-.0792	-.0142	.0662	-.0263	-.0105	.0137
23.70	.0621	.0417	-.0380	.0126	-.0165	-.0230	23.71	-.0803	-.0235	.0694	-.0227	-.0085	.0287

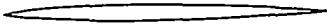
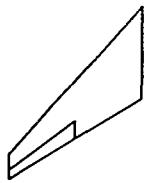


TABLE 11.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.50$ ;  $M = 0.70$

(a) Plain leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$
$\delta = 3.5$							$\delta = -6.6$						
- 2.10	.0148	- .0005	- .0036	.0045	- .0001	- .0013	- 2.10	- .0324	.0013	.0196	- .0101	- .0006	- .0064
- .00	.0206	- .0001	- .0047	.0052	- .0004	- .0005	- .01	- .0314	.0004	.0195	- .0098	- .0006	- .0045
2.12	.0166	- .0001	- .0027	.0047	- .0004	- .0003	2.09	- .0286	- .0008	.0184	- .0098	- .0004	- .0051
4.20	.0052	- .0002	- .0052	.0051	- .0008	- .0005	4.20	- .0373	- .0028	.0188	- .0094	- .0001	- .0050
6.30	.0108	- .0004	- .0075	.0047	- .0010	- .0017	6.30	- .0324	- .0029	.0178	- .0080	- .0006	- .0054
8.43	.0241	- .0027	- .0030	.0031	- .0010	- .0021	8.42	- .0187	- .0030	.0140	- .0087	.0005	- .0065
10.53	.0122	- .0022	- .0013	.0031	- .0011	- .0022	10.52	- .0184	- .0036	.0080	- .0069	.0011	- .0049
12.62	.0185	- .0032	- .0112	.0030	- .0012	- .0021	12.59	- .0270	- .0072	- .0007	- .0049	.0009	- .0055
14.69	.0174	.0113	- .0238	.0032	- .0014	- .0019	14.67	- .0252	- .0066	- .0143	- .0058	.0013	- .0056
16.74	.0207	.0046	.0018	.0031	- .0015	- .0020	16.71	- .0235	- .0087	.0087	- .0051	.0012	- .0063
18.74	.0113	- .0027	- .0041	.0028	- .0021	- .0034	18.72	- .0143	- .0055	.0043	- .0055	.0008	- .0069
20.75	.0052	.0014	.0014	.0023	- .0023	- .0043	20.74	- .0236	- .0097	.0121	- .0057	.0008	- .0086
23.80	.0083	.0033	- .0010	.0030	- .0033	- .0072	23.79	- .0174	- .0089	.0101	- .0054	.0010	- .0095
$\delta = 7.7$							$\delta = -10.5$						
- 2.11	.0283	- .0003	- .0284	.0106	- .0005	- .0006	- 2.08	- .0202	.0026	.0368	- .0164	- .0012	- .0023
- .00	.0325	.0008	- .0284	.0113	- .0008	.0023	.03	- .0185	.0019	.0338	- .0168	- .0011	- .0043
2.09	.0325	.0012	- .0287	.0106	- .0010	.0021	2.12	- .0162	- .0006	.0320	- .0161	- .0007	- .0031
4.19	.0253	.0017	- .0309	.0110	- .0014	.0019	4.22	- .0238	- .0016	.0277	- .0148	- .0002	- .0022
6.30	.0280	.0029	- .0249	.0101	- .0019	.0008	6.33	- .0169	- .0012	.0257	- .0122	- .0005	- .0027
8.41	.0321	.0048	- .0224	.0081	- .0023	- .0017	8.43	- .0274	- .0038	.0301	- .0141	.0015	- .0018
10.52	.0245	.0057	- .0191	.0083	- .0027	- .0022	10.52	- .0315	- .0041	.0237	- .0104	.0019	- .0027
12.61	.0422	.0096	- .0268	.0072	- .0028	- .0022	12.61	- .0228	- .0052	.0119	- .0082	.0020	- .0034
14.68	.0299	.0082	- .0415	.0072	- .0032	- .0030	14.66	- .0371	- .0089	- .0021	- .0088	.0024	- .0032
16.72	.0312	.0087	- .0160	.0064	- .0034	- .0031	16.71	- .0297	- .0080	.0200	- .0077	.0023	- .0026
18.73	.0296	.0095	- .0190	.0061	- .0043	- .0053	18.71	- .0342	- .0095	.0054	- .0086	.0025	- .0003
20.74	.0120	.0050	- .0156	.0052	- .0045	- .0055	20.73	- .0309	- .0107	.0190	- .0082	.0019	- .0012
23.79	.0191	.0094	- .0165	.0058	- .0061	- .0097	23.79	- .0275	- .0110	.0161	- .0055	- .0001	.0142
$\delta = 13.2$							$\delta = -15.2$						
- 2.11	.0557	.0016	- .0474	.0195	- .0017	- .0050	- 2.06	- .0366	.0053	.0568	- .0204	- .0025	- .0057
- .01	.0597	.0036	- .0474	.0198	- .0023	- .0019	.03	- .0404	.0047	.0571	- .0223	- .0023	- .0063
2.09	.0555	.0042	- .0455	.0182	- .0024	- .0023	2.12	- .0379	.0023	.0553	- .0218	- .0017	- .0060
4.19	.0522	.0058	- .0486	.0189	- .0034	- .0030	4.23	- .0357	.0008	.0496	- .0210	- .0008	- .0044
6.30	.0428	.0064	- .0448	.0172	- .0040	- .0087	6.33	- .0307	.0002	.0469	- .0177	- .0003	- .0050
8.42	.0506	.0094	- .0420	.0138	- .0047	- .0086	8.45	- .0329	- .0021	.0477	- .0191	.0013	- .0062
10.53	.0508	.0123	- .0331	.0140	- .0059	- .0092	10.53	- .0521	- .0041	.0430	- .0143	.0020	- .0074
12.60	.0396	.0109	- .0382	.0116	- .0055	- .0101	12.61	- .0392	- .0072	.0272	- .0122	.0024	- .0080
14.69	.0541	.0165	- .0507	.0124	- .0064	- .0110	14.68	- .0404	- .0070	.0128	- .0130	.0030	- .0082
16.72	.0417	.0138	- .0276	.0108	- .0065	- .0119	16.71	- .0422	- .0095	.0356	- .0121	.0032	- .0076
18.73	.0561	.0216	- .0328	.0097	- .0076	- .0137	18.70	- .0415	- .0093	.0209	- .0129	.0038	- .0061
20.73	.0202	.0106	- .0237	.0079	- .0074	- .0133	20.73	- .0469	- .0147	.0351	- .0126	.0036	- .0035
23.68	-.0894	.0140	- .0371	.0072	- .0082	- .0156	23.68	- .0402	- .0150	.0334	- .0110	.0031	.0046
$\delta = 28.2$							$\delta = -31.5$						
- 2.09	.1108	.0129	- .0762	.0346	- .0082	- .0145	- 2.07	- .0782	.0189	.0853	- .0355	- .0093	.0069
.01	.1155	.0157	- .0819	.0337	- .0089	- .0151	.02	- .0797	.0175	.0830	- .0364	- .0088	.0082
2.10	.1153	.0180	- .0807	.0329	- .0097	- .0160	2.11	- .0923	.0140	.0844	- .0373	- .0081	.0098
4.20	.1094	.0207	- .0824	.0322	- .0108	- .0181	4.22	- .0915	.0173	.0814	- .0373	- .0058	.0106
6.31	.1098	.0237	- .0776	.0314	- .0120	- .0202	6.32	- .0811	.0055	.0742	- .0328	- .0039	.0078
8.44	.1039	.0259	- .0635	.0262	- .0124	- .0225	8.43	- .0601	- .0019	.0585	- .0273	.0005	.0022
10.53	.0969	.0300	- .0591	.0277	- .0140	- .0249	10.53	- .0634	- .0053	.0478	- .0202	.0019	.0006
12.62	.0742	.0278	- .0517	.0200	- .0130	- .0238	12.61	- .0499	- .0058	.0349	- .0185	.0024	- .0009
14.69	.0762	.0314	- .0640	.0210	- .0147	- .0264	14.68	- .0704	- .0115	.0189	- .0191	.0030	- .0013
16.74	.0762	.0331	- .0386	.0196	- .0155	- .0281	16.72	- .0548	- .0080	.0432	- .0195	.0034	- .0011
18.75	.0881	.0410	- .0476	.0174	- .0176	- .0332	18.71	- .0668	- .0119	.0334	- .0211	.0044	- .0004
20.73	.0300	.0234	- .0374	.0126	- .0157	- .0302	20.74	- .0749	- .0165	.0482	- .0221	.0041	.0049
23.81	.0522	.0365	- .0392	.0110	- .0173	- .0327	23.80	- .0657	- .0155	.0540	- .0218	.0024	.0184



TABLE 11.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{y_1}{b/2} = 0.50$ ;  $M = 0.70$  - Concluded

(b) Modified leading edge

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TABLE 12.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.50$ ;  $X = 0.81$ 

(a) Plain leading edge

$\alpha_y$ deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$	$\alpha_y$ deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_I$	$\Delta C_n$	$\Delta C_T$
$b = 3.3$													
- 2.12	.0103	- .0002	- .0052	.0050	- .0001	- .0003	- 2.12	- .0317	.0012	.0229	- .0092	- .0006	- .0049
- .00	.0159	.0001	- .0040	.0055	- .0003	.0003	- .00	- .0322	.0006	.0218	- .0095	- .0006	- .0040
2.13	.0117	.0001	- .0026	.0050	- .0004	.0001	2.12	- .0389	- .0008	.0221	- .0089	- .0003	- .0050
4.24	.0104	.0004	- .0051	.0044	- .0005	.0003	4.24	- .0317	- .0016	.0175	- .0087	- .0002	- .0050
6.37	.0115	.0009	- .0004	.0045	- .0008	- .0010	6.36	- .0302	- .0030	.0173	- .0070	- .0009	- .0053
8.50	.0257	.0035	- .0044	.0039	- .0008	- .0011	8.49	- .0090	- .0017	.0119	- .0095	- .0002	- .0071
10.60	.0130	.0020	- .0032	.0035	- .0012	- .0023	10.59	- .0245	- .0050	.0118	- .0074	.0009	- .0055
12.69	.0125	.0027	- .0022	.0030	- .0013	- .0024	12.68	- .0263	- .0070	.0106	- .0056	.0008	- .0053
14.76	.0240	.0067	- .0013	.0026	- .0013	- .0023	14.76	- .0011	- .0000	.0116	- .0054	.0009	- .0058
16.91	.0169	.0049	- .0029	.0026	- .0014	- .0009	16.80	- .0146	- .0048	.0085	- .0055	.0011	- .0043
18.61	.0069	.0026	- .0001	.0026	- .0019	- .0012	18.81	- .0144	- .0041	.0094	- .0060	.0011	- .0048
20.83	.0156	.0065	- .0033	.0022	- .0014	- .0013	20.82	- .0184	- .0065	.0110	- .0060	.0016	- .0047
23.89	.0098	.0032	- .0052	.0024	- .0025	- .0047	23.90	.0020	.0013	.0105	- .0056	.0012	- .0086
$b = 7.7$													
- 2.14	.0282	- .0004	- .0262	.0109	- .0005	.0004	- 2.08	- .0125	.0025	.0363	- .0155	- .0013	- .0024
- .01	.0290	.0009	- .0285	.0115	- .0009	.0021	.03	- .0167	.0019	.0341	- .0160	- .0012	- .0046
2.11	.0283	.0014	- .0259	.0112	- .0010	.0019	2.15	- .0188	- .0006	.0335	- .0151	- .0007	- .0034
4.24	.0352	.0023	- .0288	.0108	- .0014	.0005	4.27	- .0072	- .0003	.0286	- .0141	- .0002	- .0027
6.35	.0203	.0019	- .0233	.0097	- .0017	- .0008	6.39	- .0072	- .0008	.0255	- .0109	- .0001	- .0028
8.48	.0380	.0055	- .0240	.0082	- .0021	- .0012	8.50	- .0113	- .0005	.0266	- .0175	.0008	- .0045
10.59	.0209	.0038	- .0197	.0078	- .0027	- .0034	10.58	- .0444	- .0063	.0281	- .0108	.0016	- .0041
12.68	.0249	.0063	- .0187	.0069	- .0028	- .0035	12.69	- .0158	- .0020	.0210	- .0088	.0017	- .0046
14.75	.0319	.0091	- .0171	.0062	- .0029	- .0041	14.74	- .0319	- .0062	.0203	- .0085	.0018	- .0047
16.78	.0247	.0080	- .0198	.0057	- .0032	- .0028	16.78	- .0444	- .0115	.0194	- .0080	.0018	- .0021
18.80	.0268	.0104	- .0178	.0058	- .0040	- .0041	18.79	- .0305	- .0075	.0165	- .0089	.0023	- .0001
20.83	.0356	.0152	- .0192	.0051	- .0038	- .0040	20.81	- .0232	- .0064	.0153	- .0083	.0023	- .0046
23.88	.0249	.0131	- .0174	.0047	- .0048	- .0116	23.89	- .0201	- .0068	.0198	- .0076	.0019	- .0157
$b = 13.2$													
- 2.13	.0479	.0017	- .0453	.0191	- .0017	- .0027	- 2.07	- .0290	.0054	.0528	- .0192	- .0027	- .0045
- .01	.0553	.0040	- .0470	.0199	- .0025	- .0021	.05	- .0393	.0047	.0560	- .0219	- .0027	- .0045
2.11	.0475	.0043	- .0429	.0178	- .0027	- .0034	2.16	- .0352	- .0023	.0541	- .0210	- .0018	- .0034
4.22	.0494	.0057	- .0482	.0177	- .0034	- .0047	4.27	- .0315	- .0010	.0465	- .0198	- .0009	- .0034
6.35	.0408	.0064	- .0402	.0160	- .0038	- .0058	6.39	- .0316	- .0001	.0430	- .0170	- .0005	- .0051
8.47	.0444	.0074	- .0410	.0127	- .0051	- .0099	8.51	- .0228	- .0001	.0434	- .0226	.0007	- .0078
10.60	.0458	.0107	- .0335	.0130	- .0052	- .0103	10.60	- .0431	- .0036	.0373	- .0151	.0015	- .0072
12.67	.0419	.0121	- .0328	.0120	- .0056	- .0108	12.69	- .0356	- .0063	.0387	- .0123	.0017	- .0077
14.75	.0535	.0173	- .0277	.0110	- .0059	- .0119	14.75	- .0413	- .0069	.0361	- .0129	.0022	- .0077
16.79	.0384	.0142	- .0290	.0097	- .0063	- .0110	16.79	- .0454	- .0078	.0315	- .0129	.0024	- .0054
18.80	.0404	.0172	- .0281	.0094	- .0075	- .0130	18.80	- .0372	- .0065	.0305	- .0133	.0030	- .0028
20.82	.0485	.0226	- .0295	.0081	- .0069	- .0119	20.83	- .0368	- .0098	.0336	- .0124	.0032	- .0004
23.88	.0423	.0239	- .0323	.0064	- .0072	- .0133	23.91	- .0152	- .0016	.0311	- .0124	.0033	- .0109
$b = 28.2$													
- 2.13	.1025	.0126	- .0735	.0324	- .0079	- .0111	- 2.07	- .0670	.0189	.0809	- .0322	- .0094	.0088
- .02	.1042	.0164	- .0785	.0322	- .0094	- .0162	.04	- .0738	.0183	.0803	- .0357	- .0095	.0081
2.11	.0972	.0177	- .0770	.0306	- .0098	- .0176	2.16	- .0812	.0144	.0825	- .0348	- .0081	.0101
4.22	.0936	.0197	- .0793	.0294	- .0107	- .0201	4.27	- .0740	.0103	.0756	- .0338	- .0058	.0088
6.36	.0926	.0221	- .0725	.0285	- .0118	- .0227	6.38	- .0599	.0058	.0592	- .0262	- .0031	.0050
8.49	.0891	.0236	- .0636	.0250	- .0121	- .0234	8.52	- .0364	.0008	.0456	- .0252	.0004	- .0009
10.61	.0812	.0256	- .0530	.0232	- .0126	- .0249	10.61	- .0390	.0008	.0343	- .0159	.0015	- .0025
12.68	.0622	.0243	- .0464	.0206	- .0131	- .0260	12.70	- .0342	.0031	.0354	- .0136	.0016	- .0039
14.77	.0774	.0315	- .0452	.0202	- .0143	- .0289	14.75	- .0373	.0025	.0392	- .0142	.0019	- .0040
16.82	.0740	.0339	- .0483	.0168	- .0145	- .0288	16.80	- .0461	.0055	.0306	- .0144	.0020	- .0014
18.83	.0755	.0379	- .0443	.0156	- .0162	- .0322	18.80	- .0446	.0058	.0305	- .0154	.0027	.0016
20.85	.0620	.0449	- .0475	.0130	- .0159	- .0309	20.84	- .0279	- .0008	.0338	- .0154	.0020	.0065
							23.91	- .0428	- .0074	.0455	- .0167	.0013	.0146

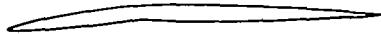
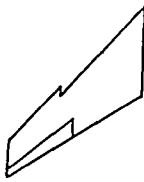


TABLE 12.- INCREMENTAL AERONAUTIC COEFFICIENTS.  $\frac{y_1}{b/2} = 0.50$ ;  $M = 0.81$  - Concluded

(b) Modified leading edge

$\alpha_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha_{deg}$	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	
$\delta = 3.3$													$\delta = -6.6$	
- 2.16	.0168	.0004	-.0039	.0048	-.0001	-.0014	- 2.16	-.0255	.0020	.0237	-.0089	-.0008	-.0057	
- .02	.0140	.0008	-.0042	.0049	-.0003	.0011	- .02	-.0327	.0013	.0230	-.0093	-.0006	-.0025	
2.10	.0193	.0014	-.0059	.0051	-.0004	.0010	2.09	-.0280	.0006	.0263	-.0088	-.0003	-.0014	
4.22	.0198	.0021	-.0039	.0050	-.0005	.0011	4.22	-.0228	-.0001	.0235	-.0092	-.0004	-.0004	
6.36	.0185	.0030	-.0040	.0042	-.0008	.0001	6.35	-.0215	-.0002	.0235	-.0095	-.0004	-.0002	
8.47	.0236	.0036	-.0047	.0049	-.0006	.0040	8.46	-.0096	.0011	.0181	-.0085	-.0006	-.0003	
10.58	.0200	.0040	-.0066	.0040	-.0010	.0001	10.56	-.0146	-.0011	.0621	-.0070	-.0010	-.0007	
12.66	.0193	.0054	-.0021	.0037	-.0011	.0004	12.66	-.0093	.0010	.0163	-.0062	-.0014	-.0026	
14.71	.0098	.0035	-.0049	.0033	-.0013	.0012	14.72	-.0127	-.0016	.0355	-.0068	-.0018	-.0024	
16.79	.0182	.0059	-.0022	.0034	-.0016	.0022	16.77	-.0274	-.0070	.0174	-.0067	-.0023	-.0034	
18.83	.0167	.0065	-.0023	.0036	-.0021	.0032	18.82	-.0169	-.0037	.0131	-.0057	-.0027	-.0047	
20.85	.0276	.0103	-.0017	.0032	-.0022	.0017	20.84	-.0053	-.0009	.0162	-.0055	-.0024	-.0041	
23.92	.0220	.0097	-.0007	.0021	-.0014	-.0003	23.90	-.0212	-.0088	.0127	-.0055	-.0030	-.0036	
$\delta = 7.7$													$\delta = -10.3$	
- 2.16	.0326	.0006	-.0181	.0101	-.0002	.0017	- 2.11	.0046	.0009	.0389	-.0149	-.0017	.0157	
- .04	.0357	.0017	-.0265	.0106	-.0007	.0018	.00	-.0063	.0023	-.0149	-.0014	-.0062		
2.09	.0416	.0028	-.0302	.0114	-.0012	.0013	2.13	-.0037	.0011	.0341	-.0148	-.0008	.0048	
4.22	.0368	.0040	-.0256	.0108	-.0014	.0014	4.26	-.0058	-.0006	.0369	-.0144	-.0001	.0049	
6.34	.0380	.0056	-.0237	.0098	-.0018	.0004	6.39	-.0036	-.0004	.0348	-.0145	-.0005	.0032	
8.46	.0338	.0055	-.0252	.0097	-.0014	.0012	8.49	-.0047	-.0005	.0239	-.0124	-.0012	-.0022	
10.56	.0301	.0061	-.0310	.0083	-.0023	.0009	10.58	-.0261	-.0044	.0764	-.0096	-.0020	-.0053	
12.64	.0251	.0072	-.0150	.0066	-.0023	.0007	12.66	-.0400	-.0082	.0341	-.0103	-.0026	-.0045	
14.71	.0333	.0102	-.0194	.0067	-.0030	.0027	14.72	-.0394	-.0103	.0281	-.0095	-.0030	-.0034	
16.76	.0183	.0065	-.0153	-.0049	-.0005	.0027	16.78	-.0511	-.0139	.0352	-.0104	-.0040	-.0028	
18.83	.0182	.0131	-.0028	.0045	-.0050	.0061	18.82	-.0450	-.0121	.0319	-.0102	-.0051	-.0007	
20.85	.0426	.0171	-.0082	.0027	-.0028	.0027	20.83	-.0278	-.0111	.0190	-.0027	-.0036	-.0103	
23.90							23.90	-.0540	-.0215	.0290	-.0064	-.0051	-.0283	
$\delta = 13.2$													$\delta = -15.2$	
- 2.16	.0542	.0014	-.0320	.0174	-.0012	-.0005	- 2.13	-.0214	.0040	.0521	-.0207	-.0036	-.0012	
- .03	.0455	.0034	-.0380	.0177	-.0020	.0006	.01	-.0315	.0046	.0476	-.0205	-.0024	.0019	
2.08	.0565	.0058	-.0445	.0192	-.0031	.0013	2.12	-.0277	.0024	.0476	-.0208	-.0019	.0020	
4.22	.0673	.0072	-.0367	.0175	-.0034	-.0023	4.26	-.0297	.0003	.0506	-.0207	-.0008	.0038	
6.34	.0552	.0089	-.0377	.0170	-.0039	-.0028	6.38	-.0274	-.0009	.0459	-.0201	-.0001	.0044	
8.47	.0748	.0118	-.0425	.0179	-.0039	-.0024	8.38	-.0384	-.0026	.0382	-.0168	-.0011	.0048	
10.57	.0559	.0116	-.0178	.0144	-.0046	-.0046	10.44	-.0556	-.0000	.0660	-.0128	-.0020	.0024	
12.64	.0211	.0071	-.0203	.0122	-.0050	-.0054	12.52	-.0764	-.0100	.0476	-.0141	-.0028	.0009	
14.71	.0493	.0153	-.0283	.0114	-.0058	-.0068	14.57	-.0709	-.0106	.0615	-.0138	-.0036	.0023	
16.78	.0438	.0158	-.0237	.0107	-.0067	-.0092	16.77	-.0607	-.0113	.0435	-.0156	-.0050	.0030	
18.83	.0277	.0176	-.0043	-.0005	-.0047	-.0113	18.81	-.0743	-.0163	.0374	-.0148	-.0062	.0041	
20.85	.0494	.0215	-.0179	.0086	-.0074	-.0083	20.82	-.0507	-.0146	.0255	-.0074	-.0048	.0135	
23.93	.0424	.0225	-.0205	.0086	-.0078	-.0100	23.92	-.0506	-.0133	.0347	-.0107	-.0060	.0329	
$\delta = 28.2$													$\delta = -35.3$	
- 2.17	.1004	.0106	-.0699	.0304	-.0067	-.0118	- 2.12	-.0643	.0181	.0860	-.0339	-.0102	.0073	
- .04	.0951	.0150	-.0757	.0306	-.0084	-.0131	.01	-.0743	.0175	.0802	-.0338	-.0090	.0101	
2.08	.1024	.0184	-.0773	.0304	-.0099	-.0161	2.13	-.0724	.0134	.0821	-.0349	-.0080	.0099	
4.21	.1044	.0206	-.0753	.0290	-.0105	-.0175	4.26	-.0690	.0115	.0849	-.0354	-.0065	.0120	
6.34	.1032	.0236	-.0734	.0282	-.0113	-.0188	6.38	-.0777	.0082	.0804	-.0351	-.0045	.0123	
8.47	.1305	.0292	-.0826	.0302	-.0121	-.0196	8.50	-.0397	-.0085	.0561	-.0284	-.0018	.0100	
10.57	.0991	.0283	-.0150	.0234	-.0121	-.0207	10.60	-.0414	-.0058	.0974	-.0221	-.0009	.0053	
12.67	.0960	.0312	-.0506	.0221	-.0129	-.0208	12.66	-.0673	-.0027	.0561	-.0214	-.0021	.0033	
14.72	.0917	.0343	-.0529	.0192	-.0134	-.0225	14.72	-.0659	-.0081	.0477	-.0200	-.0030	.0038	
16.77	.0636	.0301	-.0449	.0161	-.0143	-.0251	16.79	-.0742	-.0103	.0572	-.0205	-.0043	.0046	
18.83	.0499	.0335	-.0283	.0057	-.0126	-.0260	18.82	-.0662	-.0077	.0460	-.0196	-.0063	.0058	
20.85	.0810	.0428	-.0411	.0136	-.0151	-.0241	20.85	-.0468	-.0078	.0415	-.0127	-.0053	.0139	
23.91	.0696	.0452	-.0449	.0112	-.0156	-.0255	23.91	-.0584	-.0130	.0461	-.0157	-.0057	.0320	

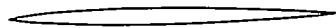
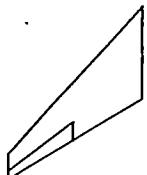


TABLE 13.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{J_1}{b/2} = 0.50$ ;  $K = 0.85$

(a) Plain leading edge

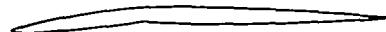
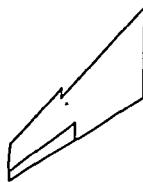


TABLE 13.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{y_1}{b/2} = 0.50$ ;  $M = 0.85$  - Concluded

(b) Modified leading edge

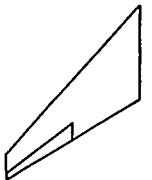


TABLE 14.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{y_1}{b/2} = 0.50$ ;  $M = 0.90$

(a) Plain leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 3.3$												$\delta = -6.6$	
- 2.12	.0080	.0023	-.0085	.0049	-.0002	-.0003	- 2.13	-.0346	.0026	.0223	-.0089	-.0007	-.0054
- .00	.0123	.0029	-.0099	.0049	-.0004	.0005	.01	-.0316	.0017	.0209	-.0099	-.0007	-.0044
2.14	.0082	.0028	-.0086	.0047	-.0006	.0002	2.14	-.0367	-.0000	.0198	-.0088	-.0006	-.0042
4.29	.0153	.0037	-.0107	.0043	-.0007	-.0002	4.30	-.0244	.0003	.0121	-.0090	-.0004	-.0044
6.42	.0093	.0027	-.0023	.0038	-.0012	-.0007	6.42	-.0099	.0012	.0071	-.0072	-.0003	-.0037
8.54	.0142	.0063	-.0082	.0042	-.0012	-.0010	8.55	-.0253	-.0030	.0212	-.0074	-.0004	-.0032
10.65	.0135	.0056	-.0154	.0029	-.0013	-.0023	10.66	-.0276	-.0030	.0210	-.0101	-.0006	-.0041
12.74	.0114	.0054	-.0083	.0038	-.0016	-.0022	12.73	-.0309	-.0054	.0117	-.0068	-.0009	-.0037
14.82	-.0084	.0023	-.0033	.0023	-.0014	-.0024	14.82	-.0203	-.0069	.0200	-.0068	-.0011	-.0029
$\delta = 7.7$													
- 2.14	.0241	.0011	-.0281	.0107	-.0005	.0005	- 2.09	-.0160	.0048	.0368	-.0153	-.0019	-.0044
- .01	.0273	.0023	-.0304	.0112	-.0010	.0023	.05	-.0091	.0034	.0315	-.0164	-.0017	-.0046
2.14	.0302	.0027	-.0286	.0107	-.0013	.0012	2.18	-.0058	.0008	.0285	-.0150	-.0011	-.0040
4.27	.0388	.0055	-.0423	.0097	-.0015	.0005	4.32	-.0050	.0012	.0200	-.0140	-.0006	-.0043
6.40	.0316	.0055	-.0313	.0086	-.0025	-.0015	6.45	-.0117	.0010	.0256	-.0120	-.0004	-.0040
8.52	.0646	-.0003	-.0181	.0092	-.0023	-.0017	8.57	-.0242	-.0008	.0313	-.0110	-.0007	-.0038
10.65	.0275	.0067	-.0280	.0071	-.0031	-.0033	10.68	-.0344	-.0026	.0355	-.0173	-.0012	-.0057
12.74	.0267	.0071	-.0208	.0084	-.0034	-.0042	12.74	-.0506	-.0141	.0302	-.0111	-.0014	-.0056
14.80	.0160	.0630	-.0142	.0059	-.0032	-.0042	14.81	-.0201	-.0045	.0234	-.0090	-.0011	-.0048
$\delta = 13.2$													
- 2.14	.0499	.0031	-.0489	.0180	-.0019	-.0034	- 2.08	-.0118	.0070	.0434	-.0256	-.0033	-.0024
- .01	.0446	.0055	-.0474	.0182	-.0030	-.0032	.06	-.0166	.0063	.0437	-.0213	-.0033	-.0018
2.12	.0395	.0059	-.0445	.0170	-.0033	-.0051	2.20	-.0092	.0032	.0388	-.0196	-.0022	-.0016
4.26	.0459	.0074	-.0530	.0162	-.0036	-.0062	4.33	-.0069	.0035	.0257	-.0184	-.0014	-.0020
6.40	.0404	.0076	-.0401	.0144	-.0048	-.0093	6.46	-.0135	.0040	.0370	-.0171	-.0009	-.0027
8.53	.0403	.0102	-.0383	.0145	-.0050	-.0100	8.58	-.0258	.0022	.0419	-.0161	-.0002	-.0033
10.64	.0322	.0088	-.0343	.0127	-.0056	-.0112	10.68	-.0416	-.0014	.0424	-.0202	-.0009	-.0054
12.74	.0639	.0176	-.0471	.0144	-.0069	-.0132	12.74	-.0535	-.0054	.0321	-.0140	-.0008	-.0050
14.82	.0464	.0182	-.0273	.0102	-.0063	-.0132	14.83	-.0187	-.0014	.0277	-.0125	-.0006	-.0046
$\delta = 15.2$													
- 2.14	.0499	.0031	-.0489	.0180	-.0019	-.0034	- 2.08	-.0118	.0070	.0434	-.0256	-.0033	-.0024
- .01	.0446	.0055	-.0474	.0182	-.0030	-.0032	.06	-.0166	.0063	.0437	-.0213	-.0033	-.0018
2.12	.0395	.0059	-.0445	.0170	-.0033	-.0051	2.20	-.0092	.0032	.0388	-.0196	-.0022	-.0016
4.26	.0459	.0074	-.0530	.0162	-.0036	-.0062	4.33	-.0069	.0035	.0257	-.0184	-.0014	-.0020
6.40	.0404	.0076	-.0401	.0144	-.0048	-.0093	6.46	-.0135	.0040	.0370	-.0171	-.0009	-.0027
8.53	.0403	.0102	-.0383	.0145	-.0050	-.0100	8.58	-.0258	.0022	.0419	-.0161	-.0002	-.0033
10.64	.0322	.0088	-.0343	.0127	-.0056	-.0112	10.68	-.0416	-.0014	.0424	-.0202	-.0009	-.0054
12.74	.0639	.0176	-.0471	.0144	-.0069	-.0132	12.74	-.0535	-.0054	.0321	-.0140	-.0008	-.0050
14.82	.0464	.0182	-.0273	.0102	-.0063	-.0132	14.83	-.0187	-.0014	.0277	-.0125	-.0006	-.0046
$\delta = 20.2$												$\delta = -31.3$	
- 2.17	.0837	.0144	-.0798	.0310	-.0083	-.0150	- 2.07	-.0546	.0214	.0744	-.0298	-.0102	-.0076
-.03	.0893	.0182	-.0809	.0296	-.0100	-.0181	.07	-.0601	.0206	.0750	-.0320	-.0101	-.0088
2.11	.0829	.0197	-.0767	.0280	-.0108	-.0210	2.20	-.0594	.0165	.0754	-.0328	-.0085	-.0099
4.26	.0923	.0223	-.0890	.0275	-.0113	-.0234	4.33	-.0558	.0195	.0611	-.0312	-.0067	-.0071
6.40	.0850	.0258	-.0741	.0243	-.0136	-.0289	6.46	-.0358	.0098	.0511	-.0241	-.0030	-.0023
8.53	.0731	.0247	-.0623	.0238	-.0127	-.0281	8.59	-.0572	-.0002	.0616	-.0195	-.0006	-.0008
10.65	.0831	.0302	-.0713	.0198	-.0137	-.0303	10.68	-.0224	-.0008	.0338	-.0172	-.0013	-.0048
12.73	.0811	.0297	-.0653	.0251	-.0152	-.0310	12.74	-.0447	-.0039	.0249	-.0107	-.0011	-.0048
14.84	.1072	.0358	-.0538	.0168	-.0157	-.0358	14.83	-.0308	-.0046	.0329	-.0102	-.0007	-.0052

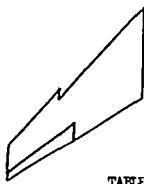


TABLE 14.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{Y_1}{b/2} = 0.50$ ;  $K = 0.90$  - Concluded

(b) Modified leading edge

$\alpha$ , deg	$\Delta\alpha_L$	$\Delta\alpha_D$	$\Delta\alpha_n$	$\Delta\alpha_l$	$\Delta\alpha_n$	$\Delta\alpha_T$	$\alpha$ , deg	$\Delta\alpha_L$	$\Delta\alpha_D$	$\Delta\alpha_n$	$\Delta\alpha_l$	$\Delta\alpha_n$	$\Delta\alpha_T$
<b><math>\delta = 3.3</math></b>													
- 2.17	.0191	- .0000	- .0077	.0047	- .0001	.0015	- 2.18	- .0338	.0027	.0266	- .0086	- .0008	- .0024
- .03	.0184	.0008	- .0032	.0048	- .0002	.0014	- .03	- .0246	.0017	.0254	- .0096	- .0006	- .0019
2.12	.0160	.0012	- .0017	.0051	- .0003	.0010	2.12	- .0207	.0007	.0254	- .0095	- .0003	- .0014
4.26	.0226	.0023	- .0093	.0046	- .0005	.0008	4.26	- .0146	.0017	.0194	- .0093	- .0000	- .0003
6.39	.0160	.0026	- .0045	.0041	- .0007	.0009	6.40	- .0191	- .0009	.0206	- .0085	.0004	.0008
8.50	.0236	.0063	- .0139	.0044	- .0010	.0000	8.50	- .0187	- .0012	.0187	- .0068	.0013	.0030
10.61	.0253	.0093	- .0046	.0036	- .0010	.0005	10.60	- .0066	.0052	.0153	- .0072	.0012	.0026
12.78	.0274	.0076	- .0010	.0017	- .0022	.0002	12.72	.0045	.0052	.0225	- .0099	.0006	.0008
14.82	.0189	.0094	.0057	.0029	- .0014	.0012	14.80	- .0081	- .0000	.0151	- .0065	.0023	.0047
<b><math>\delta = -6.6</math></b>													
- .05	.0240	.0013	- .0255	.0098	- .0003	.0041	- 2.13	.0154	- .0000	.0304	- .0147	- .0023	- .0045
- .05	.0285	.0021	- .0254	.0100	- .0007	.0017	- .02	.0087	.0084	.0344	- .0148	- .0014	- .0051
2.10	.0386	.0034	- .0296	.0109	- .0011	.0004	4.30	.0068	.0013	.0304	- .0147	- .0001	- .0048
4.24	.0385	.0051	- .0298	.0102	- .0017	.0003	6.43	.0001	- .0002	.0279	- .0131	.0007	- .0038
6.38	.0354	.0069	- .0259	.0087	- .0020	.0011	8.52	- .0536	- .0090	.0530	- .0125	.0019	- .0043
8.49	.0366	.0104	- .0323	.0080	- .0024	.0024	10.64	- .0205	- .0017	.0418	- .0109	.0020	- .0050
10.61	.0438	.0152	- .0162	.0061	- .0030	.0039	12.70	- .0419	- .0079	.0420	- .0103	.0023	- .0049
12.71	.0535	.0153	- .0110	.0041	- .0033	.0050	14.79	- .0592	- .0148	.0358	- .0106	.0036	- .0032
14.80	.0185	.0095	- .0046	.0040	- .0026	- .0042							
<b><math>\delta = 7.7</math></b>													
<b><math>\delta = -10.3</math></b>													
- 2.20	.0420	.0028	- .0352	.0157	- .0015	.0019	- 2.13	.0154	- .0000	.0304	- .0147	- .0023	- .0045
- .04	.0494	.0044	- .0376	.0166	- .0023	.0001	- .01	.0087	.0084	.0344	- .0148	- .0014	- .0051
2.10	.0499	.0061	- .0380	.0172	- .0033	.0029	2.16	.0150	.0030	.0475	- .0204	- .0021	- .0010
4.24	.0549	.0089	- .0443	.0167	- .0039	.0042	4.31	- .0223	.0004	.0519	- .0202	- .0010	- .0021
6.37	.0447	.0076	- .0372	.0146	- .0042	.0050	6.43	.0126	.0004	.0371	- .0183	.0003	- .0023
8.49	.0508	.0135	- .0407	.0131	- .0051	.0078	8.53	- .0509	- .0025	.0599	- .0155	.0018	- .0027
10.61	.0715	.0215	- .0325	.0153	- .0060	.0090	10.62	- .0289	.0020	.0436	- .0147	.0018	- .0002
12.72	.0670	.0199	- .0192	.0102	- .0064	.0099	12.70	- .0534	- .0048	.0517	- .0145	.0017	- .0001
14.81	.0501	.0194	- .0186	.0074	- .0052	- .0093	14.81	- .0608	- .0093	.0471	- .0152	.0033	- .0019
<b><math>\delta = 13.2</math></b>													
<b><math>\delta = -15.2</math></b>													
- 2.20	.0420	.0028	- .0352	.0157	- .0015	.0019	- 2.12	- .0068	.0034	.0466	- .0196	- .0027	.0002
- .04	.0494	.0044	- .0376	.0166	- .0023	.0001	- .01	.0049	.0049	.0454	- .0193	- .0028	.0011
2.10	.0499	.0061	- .0380	.0172	- .0033	.0029	2.16	- .0150	.0030	.0475	- .0204	- .0021	.0010
4.24	.0549	.0089	- .0443	.0167	- .0039	.0042	4.31	- .0223	.0004	.0519	- .0202	- .0010	.0021
6.37	.0447	.0076	- .0372	.0146	- .0042	.0050	6.43	.0126	.0004	.0371	- .0183	.0003	.0023
8.49	.0508	.0135	- .0407	.0131	- .0051	.0078	8.53	- .0509	- .0025	.0599	- .0155	.0018	.0027
10.61	.0715	.0215	- .0325	.0153	- .0060	.0090	10.62	- .0289	.0020	.0436	- .0147	.0018	.0002
12.72	.0670	.0199	- .0192	.0102	- .0064	.0099	12.70	- .0534	- .0048	.0517	- .0145	.0017	.0001
14.81	.0501	.0194	- .0186	.0074	- .0052	- .0093	14.81	- .0608	- .0093	.0471	- .0152	.0033	.0019
<b><math>\delta = 28.2</math></b>													
<b><math>\delta = -51.3</math></b>													
- 2.21	.0773	.0127	- .0673	.0279	- .0073	.0096	- 2.11	- .0437	.0183	.0798	- .0309	- .0107	.0098
- .06	.0872	.0164	- .0723	.0287	- .0091	.0146	- .02	- .0520	.0183	.0787	- .0313	- .0094	.0103
2.09	.0899	.0192	- .0718	.0284	- .0107	.0190	2.17	- .0567	.0184	.0827	- .0335	- .0083	.0100
4.23	.0981	.0224	- .0776	.0275	- .0112	.0203	4.32	- .0606	.0118	.0830	- .0340	- .0064	.0104
6.36	.0866	.0240	- .0742	.0259	- .0117	.0212	6.44	- .0579	.0065	.0740	- .0316	- .0037	.0083
8.48	.0869	.0278	- .0698	.0230	- .0128	.0244	8.54	- .0737	- .0016	.0742	- .0215	- .0002	.0045
10.59	.0985	.0323	- .0623	.0242	- .0137	.0251	10.65	- .0515	.0038	.0466	- .0162	.0009	.0023
12.70	.1106	.0374	- .0613	.0209	- .0145	.0266	12.71	- .0316	.0010	.0446	- .0128	.0014	.0014
14.80	.0840	.0365	- .0450	.0155	- .0135	- .0264	14.80	- .0659	- .0062	.0466	- .0144	.0032	.0019



TABLE 15.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{y_1}{b/2} = 0.50$ ;  $M = 0.94$

(a) Plain leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 3.3$							$\delta = -6.6$						
-2.14	.0051	.0027	-.0083	.0046	-.0003	-.0006	-2.13	-.0301	.0033	.0206	-.0090	-.0008	-.0043
- .00	.0093	.0031	-.0071	.0049	-.0004	.0004	.01	-.0302	.0026	.0218	-.0098	-.0007	-.0037
2.13	.0089	.0038	-.0098	.0048	-.0006	.0003	2.15	-.0250	.0023	.0174	-.0086	-.0005	-.0039
4.27	.0119	.0052	-.0044	.0040	-.0007	-.0004	4.27	-.0264	.0007	.0150	-.0078	-.0001	-.0030
6.39	.0097	.0046	-.0123	.0037	-.0011	-.0012	6.41	-.0170	-.0011	.0126	-.0067	-.0002	-.0027
8.54	.0167	.0062	-.0048	.0033	-.0010	-.0009	8.52	-.0088	.0022	-.0012	-.0078	-.0005	-.0025
10.62	.0171	.0059	-.0203	.0036	-.0014	-.0020	10.64	-.0394	-.0058	.0284	-.0079	-.0007	-.0026
$\delta = 7.7$							$\delta = -10.3$						
-2.15	.0205	.0021	-.0271	.0105	-.0006	.0012	-2.08	-.0057	.0038	.0347	-.0154	-.0020	-.0055
- .01	.0266	.0030	-.0259	.0108	-.0011	.0017	.05	-.0045	.0035	.0302	-.0158	-.0017	-.0045
2.12	.0208	.0045	-.0290	.0099	-.0015	.0005	2.18	-.0030	.0015	.0266	-.0137	-.0011	-.0038
4.26	.0277	.0023	-.0251	.0085	-.0016	-.0000	4.31	-.0028	-.0012	.0264	-.0129	-.0005	-.0040
6.39	.0197	.0050	-.0248	.0078	-.0023	-.0021	6.44	-.0108	-.0001	.0273	-.0119	-.0000	-.0041
8.48	.0451	.0106	-.0071	.0028	-.0031	-.0031	8.55	-.0091	.0041	.0178	-.0117	-.0003	-.0040
10.62	-.0027	.0009	-.0050	.0073	-.0030	-.0042	10.67	-.0451	-.0050	.0514	-.0111	-.0007	-.0049
$\delta = 13.2$							$\delta = -15.2$						
-2.16	.0397	.0036	-.0458	.0170	-.0020	-.0032	-2.07	-.0058	.0085	.0440	-.0199	-.0039	-.0022
- .02	.0420	.0086	-.0466	.0172	-.0031	-.0043	.06	-.0024	.0082	.0359	-.0203	-.0033	-.0010
2.11	.0420	.0064	-.0476	.0164	-.0035	-.0055	2.18	-.0040	.0063	.0296	-.0167	-.0021	-.0002
4.25	.0455	.0070	-.0424	.0144	-.0038	-.0067	4.31	-.0039	.0024	.0269	-.0163	-.0011	-.0028
6.38	.0343	.0102	-.0397	.0128	-.0049	-.0099	6.44	-.0047	.0053	.0216	-.0126	-.0003	-.0020
8.50	.0496	.0126	-.0550	.0125	-.0053	-.0110	8.54	-.0032	.0071	.0100	-.0146	-.0002	-.0030
10.60	.0695	.0187	-.0735	.0130	-.0070	-.0145	10.66	-.0148	.0043	.0229	-.0164	-.0005	-.0033
$\delta = 28.2$							$\delta = -31.3$						
-2.17	.0823	.0147	-.0774	.0298	-.0085	-.0151	-2.06	-.0486	.0212	.0726	-.0293	-.0106	.0083
- .03	.0834	.0182	-.0778	.0286	-.0101	-.0188	.07	-.0504	.0207	.0721	-.0310	-.0101	.0097
2.10	.0833	.0205	-.0799	.0273	-.0110	-.0221	2.20	-.0505	.0182	.0689	-.0303	-.0083	.0089
4.24	.0766	.0208	-.0714	.0243	-.0111	-.0235	4.33	-.0395	.0121	.0655	-.0294	-.0063	.0052
6.38	.0685	.0226	-.0657	.0221	-.0129	-.0269	6.45	-.0300	.0083	.0481	-.0212	-.0025	-.0007
8.51	.0996	.0330	-.0880	.0194	-.0142	-.0327	8.57	-.0135	.0096	.0327	-.0166	-.0010	-.0029
10.60	.0633	.0272	-.0673	.0188	-.0150	-.0339	10.69	-.0468	.0006	.0625	-.0142	-.0003	-.0049

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TABLE 15.- INCREMENTAL AERODYNAMIC COEFFICIENTS.  $\frac{y_1}{b/2} = 0.50$ ;  $H = 0.94$  - Concluded

## (b) Modified leading edge

$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$	$\alpha$ , deg	$\Delta C_L$	$\Delta C_D$	$\Delta C_m$	$\Delta C_l$	$\Delta C_n$	$\Delta C_T$
$\delta = 3.3$							$\delta = -6.6$						
- 2.19 -.03 2.10 4.24 6.37 8.47 10.58	.0178 .0134 .0164 .0151 .0196 .0186 .0530	.0020 .0015 .0019 .0030 .0030 .0068 .0128	-.0013 -.0034 -.0050 -.0078 -.0049 -.0145 -.0430	.0055 .0042 .0047 .0048 .0041 .0039 .0031	.0001 -.0002 -.0003 -.0006 -.0009 -.0011 -.0014	.0027 .0017 .0012 .0008 -.0007 -.0009 -.0013	- 2.18 -.03 2.11 4.25 6.36 8.49 10.59	-.0174 -.0237 .0254 -.0207 -.0151 -.0103 	.0027 .0014 .0019 .0014 .0012 .0016 .0076	.0250 .0226 .0240 .0197 -.0084 -.0071 -.0162	-.0083 -.0091 -.0084 -.0083 -.0002 -.0011 -.0078	-.0007 -.0005 -.0002 -.0002 -.0006 -.0021 -.0012	-.0011 -.0016 -.0010 -.0006 -.0021 .0028 .0040
$\delta = 7.7$							$\delta = -10.3$						
- 2.19 -.05 2.07 4.22 6.34 8.46 10.57	.0272 .0235 .0223 .0254 .0245 .0252 .0608	.0027 .0035 .0055 .0047 .0112 	-.0179 -.0230 -.0282 -.0255 -.0285 -.0245 -.0541	.0089 .0097 .0096 .0090 .0073 .0072 .0066	-.0003 -.0008 -.0013 -.0017 -.0021 -.0026 -.0032	.0036 .0017 .0001 -.0007 -.0022 -.0031 -.0044	- 2.11 -.02 2.15 4.29 6.40 8.53 10.63	-.0238 -.0150 .0159 -.0142 -.0046 -.0029 -.0186	.0025 .0026 .0036 .0023 .0029 .0037 -.0001	.0351 .0283 .0261 .0246 .0210 .0123 -.0128	-.0136 -.0142 -.0133 -.0131 -.0114 -.0123 -.0116	-.0020 -.0016 -.0008 -.0001 -.0010 -.0017 -.0043	-.0050 -.0054 -.0049 -.0043 -.0050 -.0046 -.0043
$\delta = 15.2$							$\delta = -15.2$						
- 2.20 -.06 2.08 4.22 6.34 8.44 10.57	.0377 .0407 .0409 .0405 .0341 .0374 .0726	.0046 .0042 .0037 .0093 .0133 .0153 .0201	-.0304 -.0367 -.0396 -.0375 -.0382 -.0426 -.0661	.0143 .0157 .0164 .0144 .0131 .0120 .0120	-.0016 -.0026 -.0035 -.0040 -.0045 -.0054 -.0067	.0019 -.0004 -.0032 -.0048 -.0066 -.0093 -.0112	- 2.12 -.01 2.16 4.29 6.40 8.52 10.64	-.0022 -.0039 -.0034 -.0009 -.0026 -.0107 -.0186	.0036 .0043 .0048 .0048 .0054 -.0000 -.0025	.0464 .0412 .0390 .0320 .0221 .0372 .0394	-.0094 -.0092 -.0085 -.0079 -.0064 -.0062 -.0069	-.0036 -.0035 -.0030 -.0020 -.0008 -.0004 -.0008	-.0011 -.0014 -.0017 -.0020 -.0009 -.0006 -.0003
$\delta = 28.2$							$\delta = -31.3$						
- 2.21 -.07 2.07 4.20 6.33 8.44 10.55	.0731 .0773 .0913 .0717 .0718 .0693 .1068	.0146 .0175 .0189 .0218 .0244 .0285 .0389	-.0588 -.0692 -.0788 -.0701 -.0659 -.0654 -.0982	.0256 .0279 .0279 .0237 .0218 .0191 .0170	-.0072 -.0092 -.0105 -.0106 -.0112 -.0129 -.0150	-.0094 -.0142 -.0186 -.0192 -.0216 -.0270 -.0308	- 2.11 -.02 2.18 4.30 6.42 8.45 10.64	-.0374 -.0423 -.0382 -.0417 -.0322 -.0279 -.0201	.0176 .0170 .0171 .0143 .0085 .0020 .0039	.0789 .0760 .0734 .0678 .0604 .0604 .0392	-.0305 -.0306 -.0313 -.0307 -.0270 -.0204 -.0150	-.0105 -.0095 -.0081 -.0056 -.0029 -.0004 -.0010	-.0100 -.0103 -.0097 -.0080 -.0050 -.0030 -.0010

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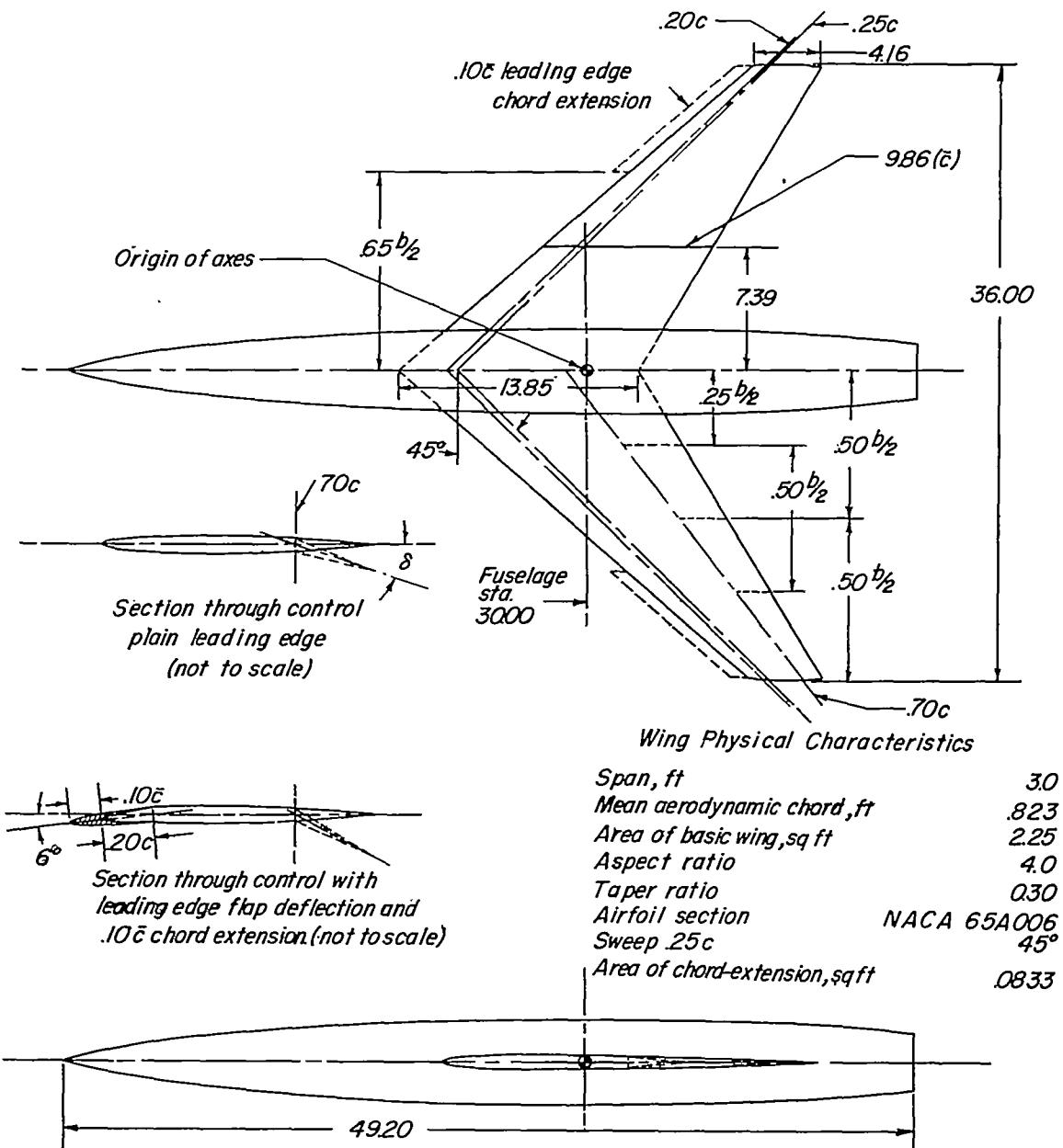


Figure 1.- General arrangement of model and controls. All dimensions are in inches unless otherwise noted.

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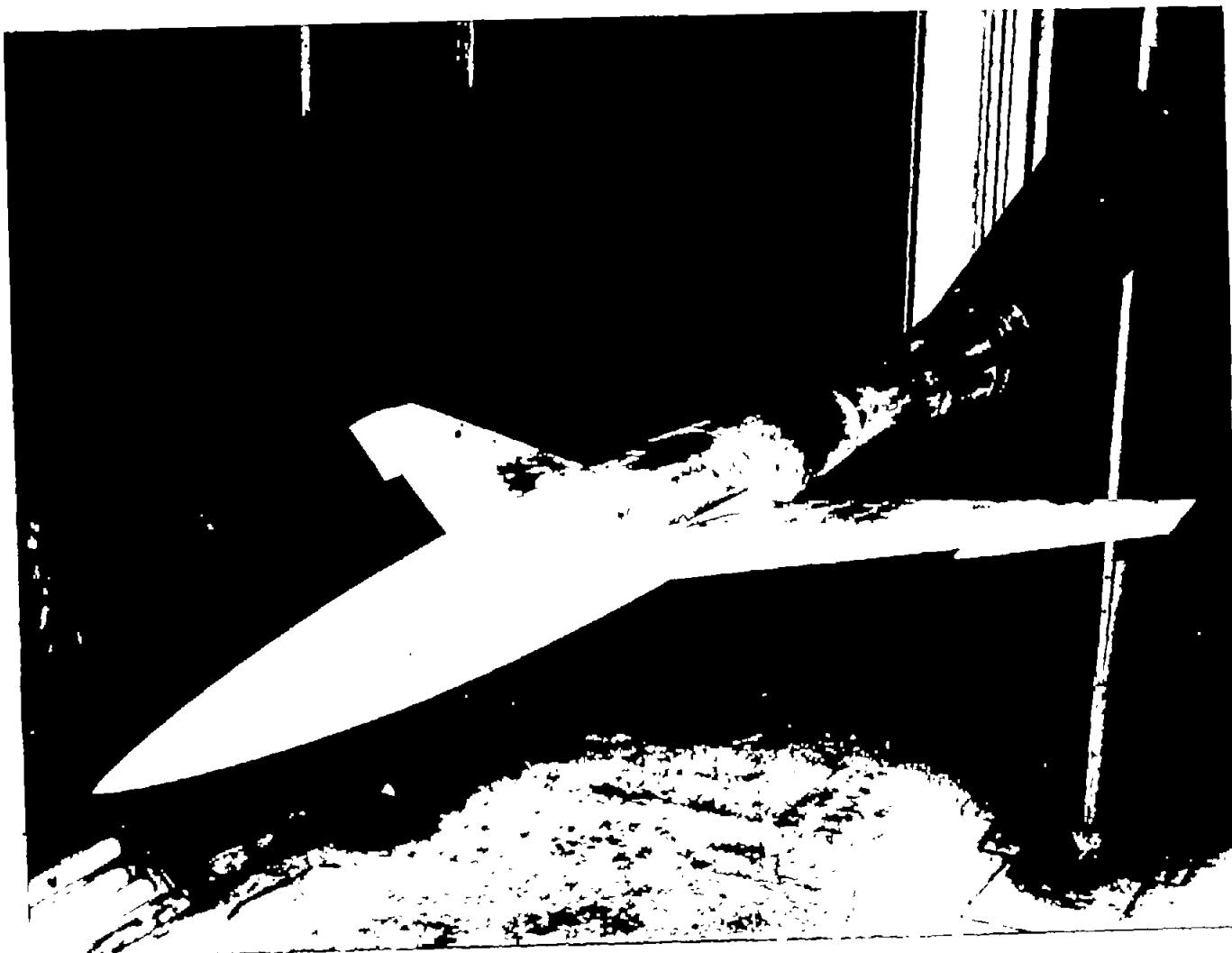


Figure 2.- Photograph of the model mounted in the Langley high-speed 7- by 10-foot tunnel. L-74562

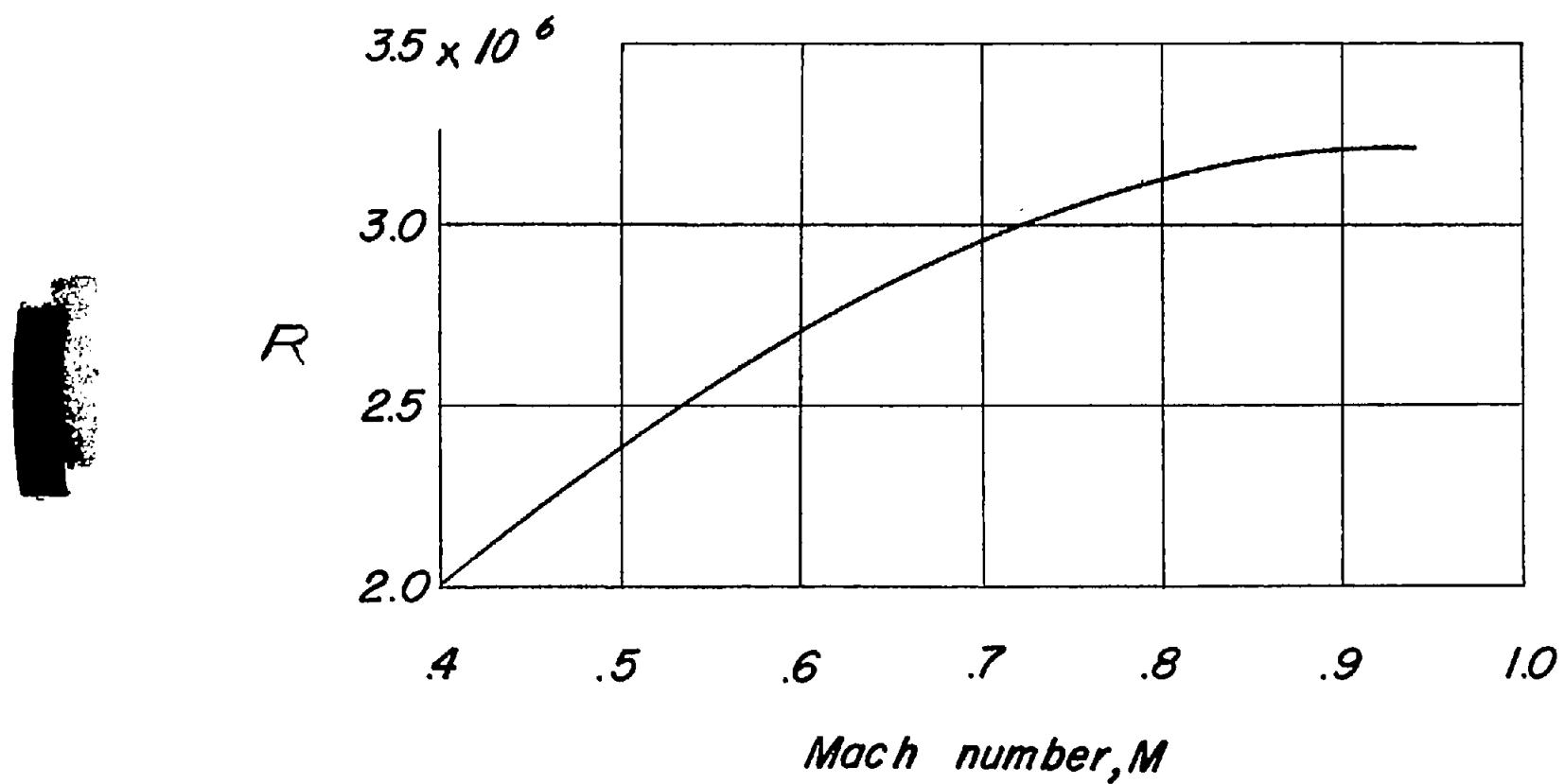


Figure 3.- Variation of average test Reynolds number with Mach number.

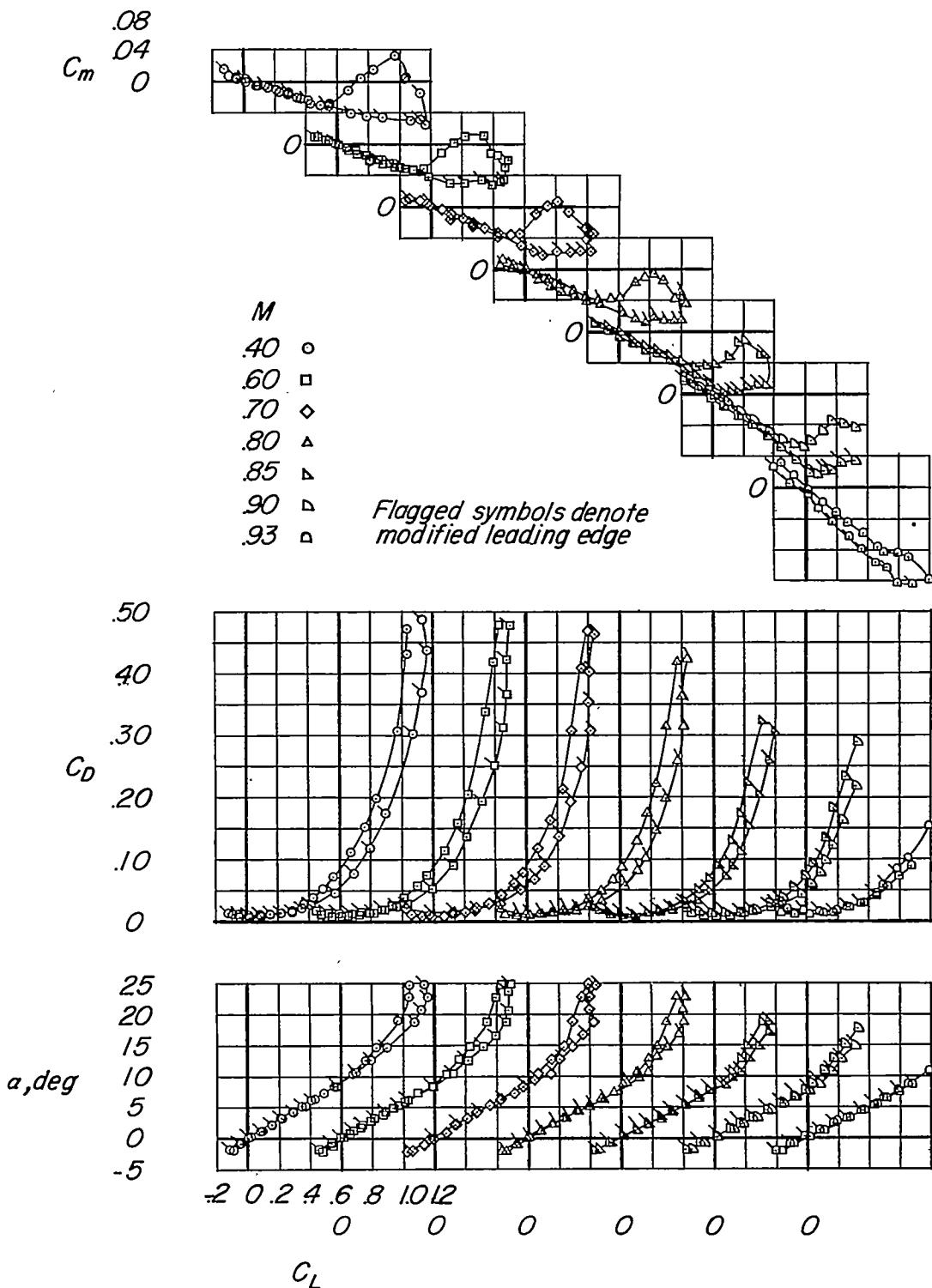
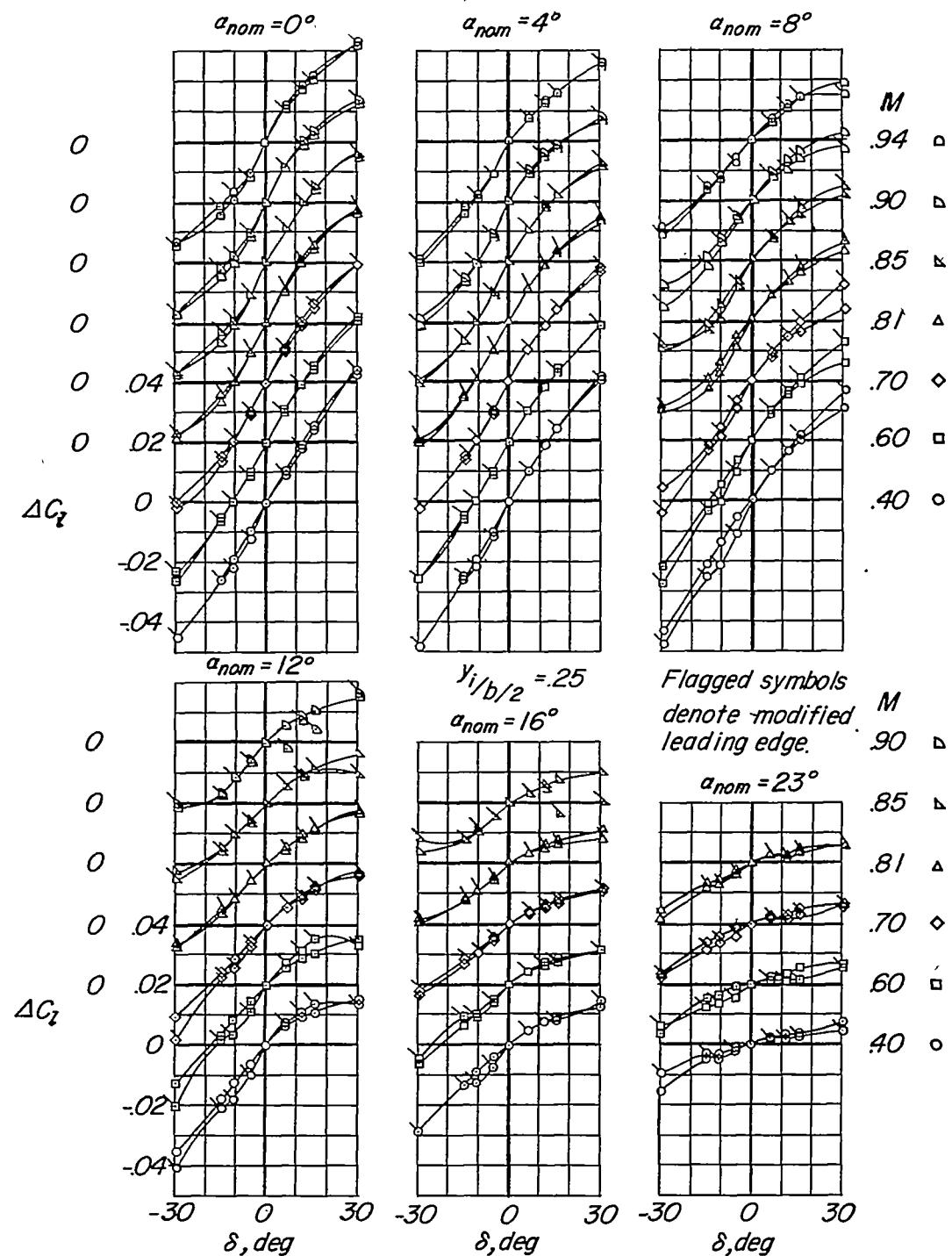
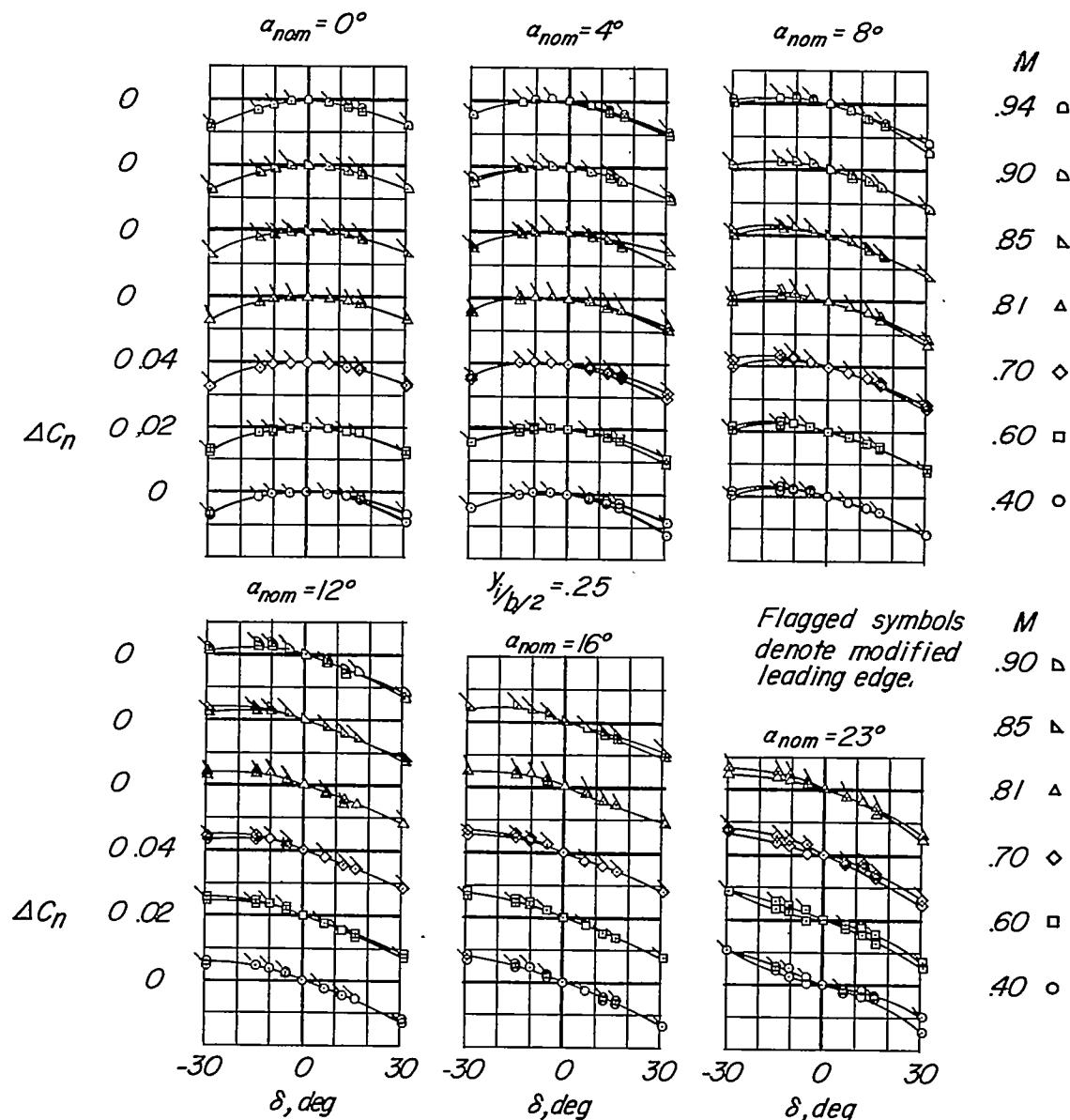


Figure 4.- Effect of wing leading-edge modification on the lift, drag, and pitching-moment characteristics of the model without controls.  
(Data taken from ref. 5.)



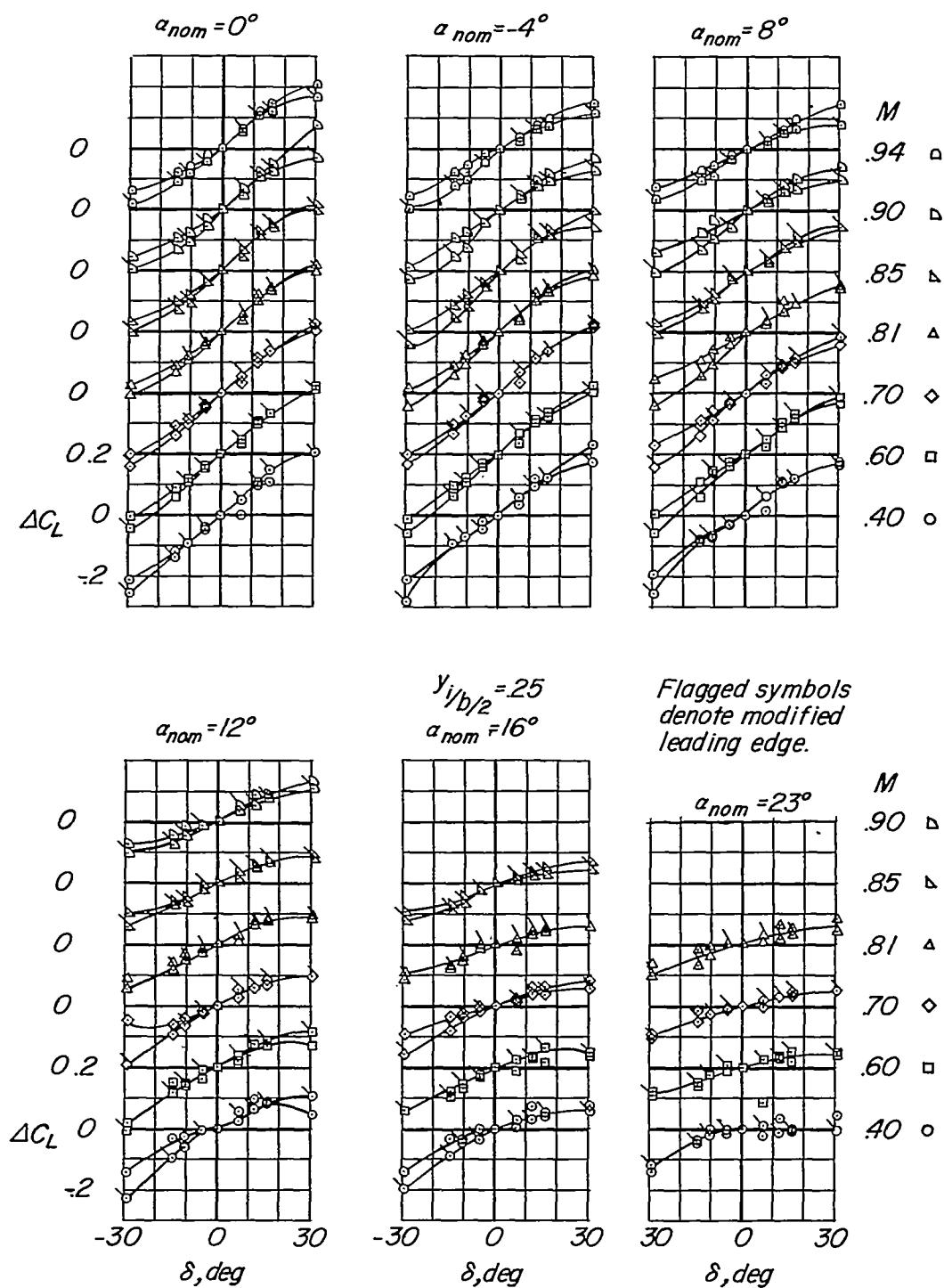
(a) Rolling-moment coefficient.

Figure 5.- Effect of wing leading-edge modification on the variation of incremental aerodynamic coefficients with inboard aileron deflection.



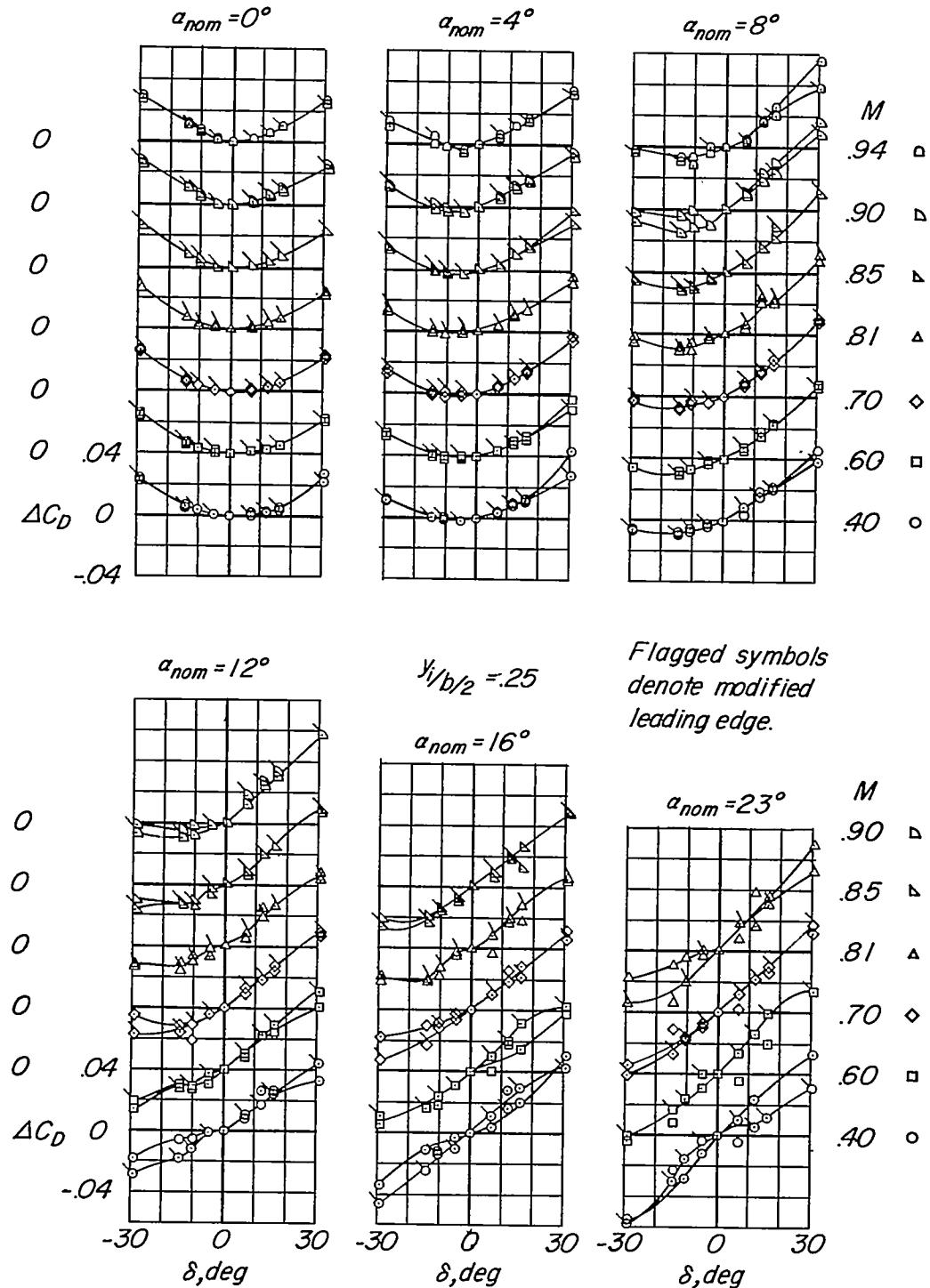
(b) Yawing-moment coefficient.

Figure 5.- Continued.



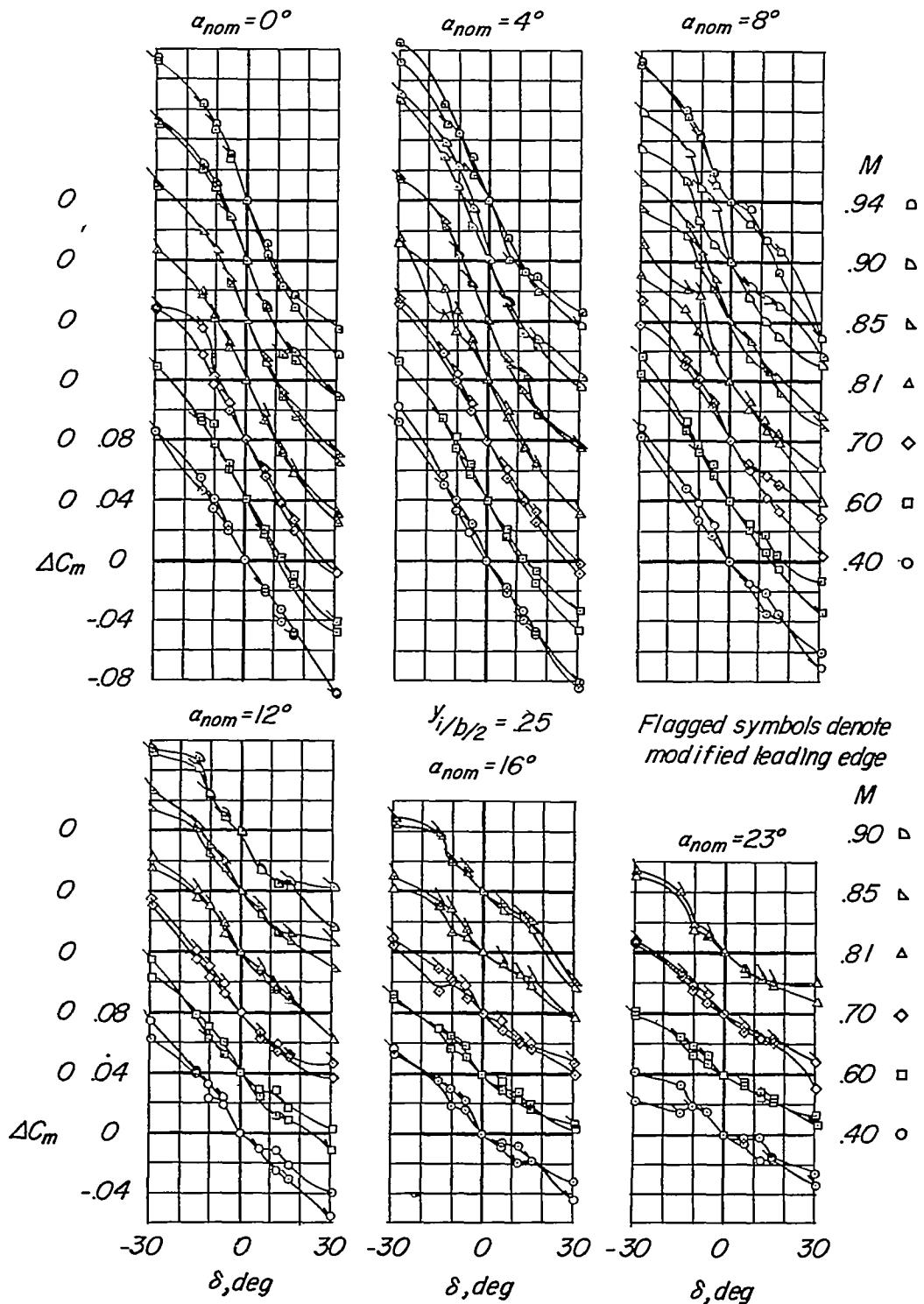
(c) Lift coefficient.

Figure 5.- Continued.



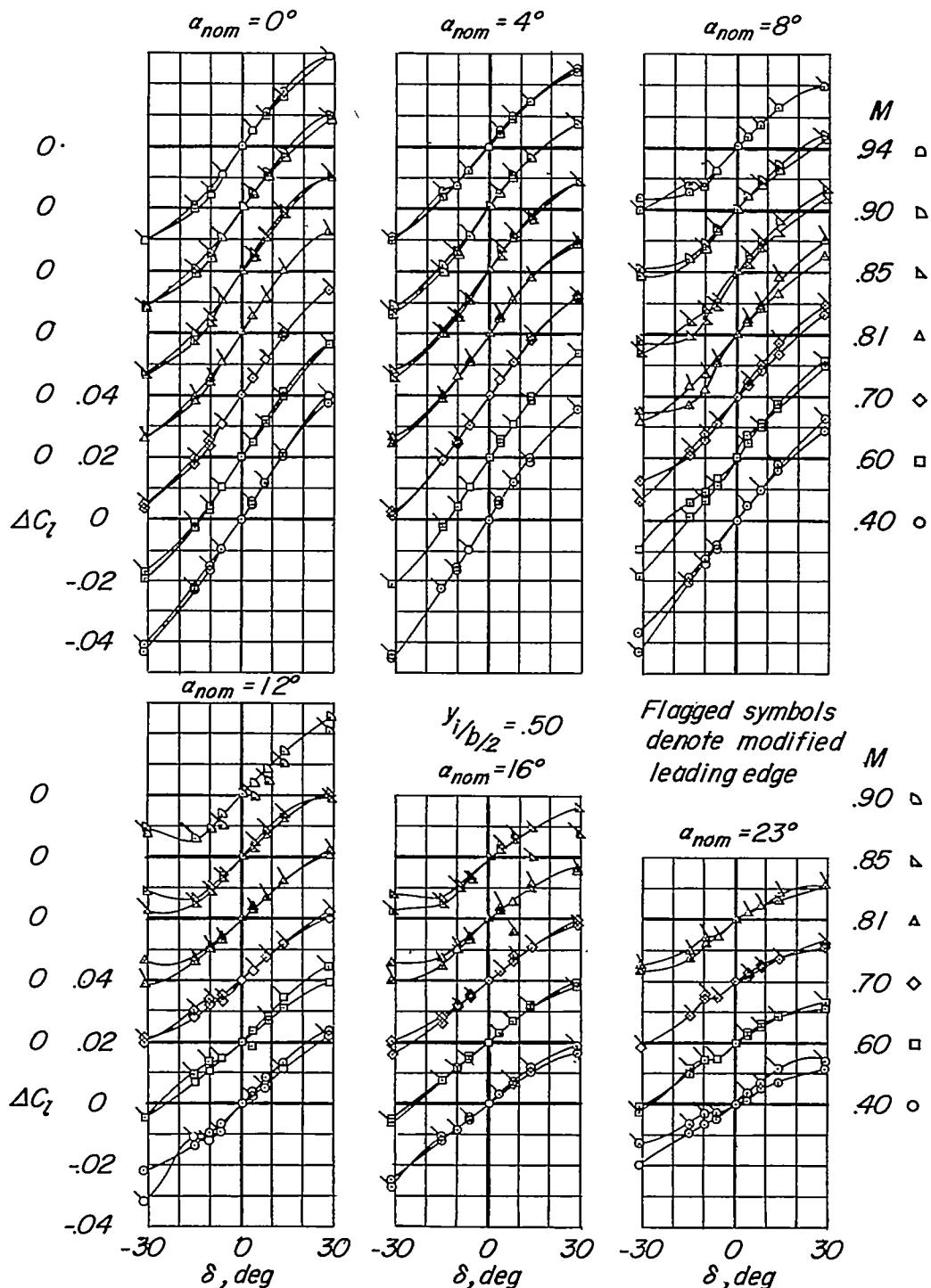
(d) Drag coefficient.

Figure 5.- Continued.



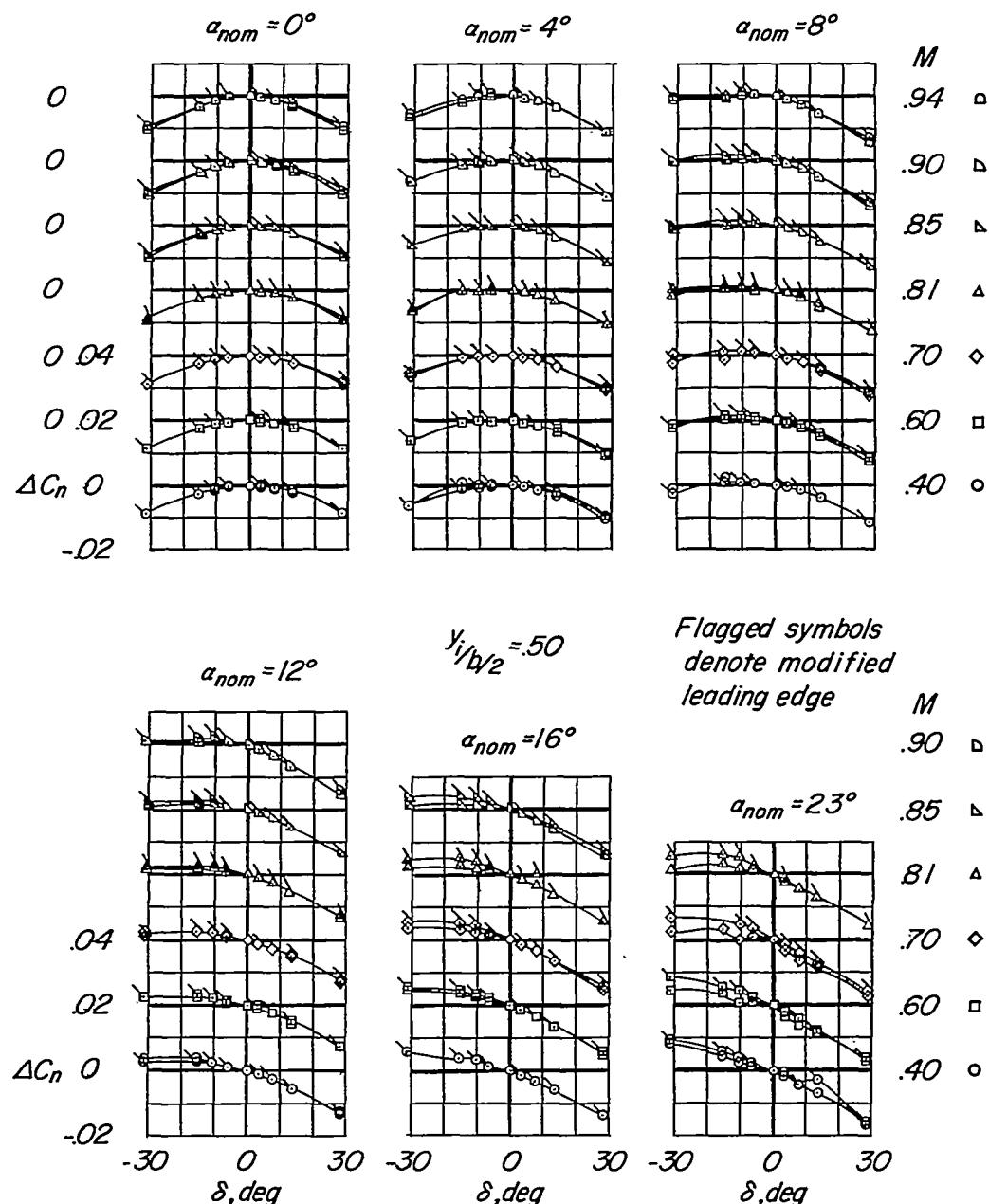
(e) Pitching-moment coefficient.

Figure 5.- Concluded.



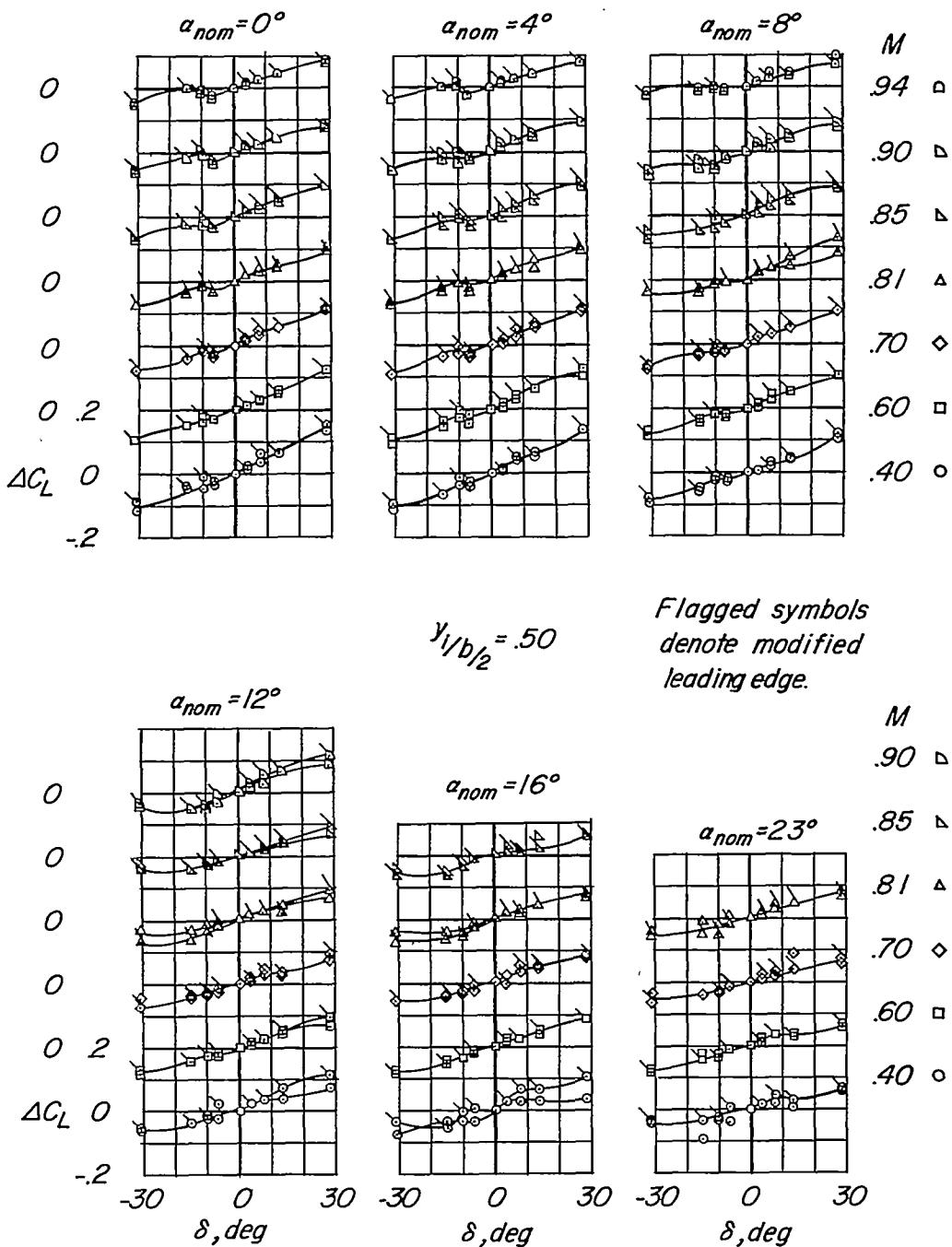
(a) Rolling-moment coefficient.

Figure 6.- Effect of wing leading-edge modification on the variation of incremental aerodynamic coefficients with outboard aileron deflection.



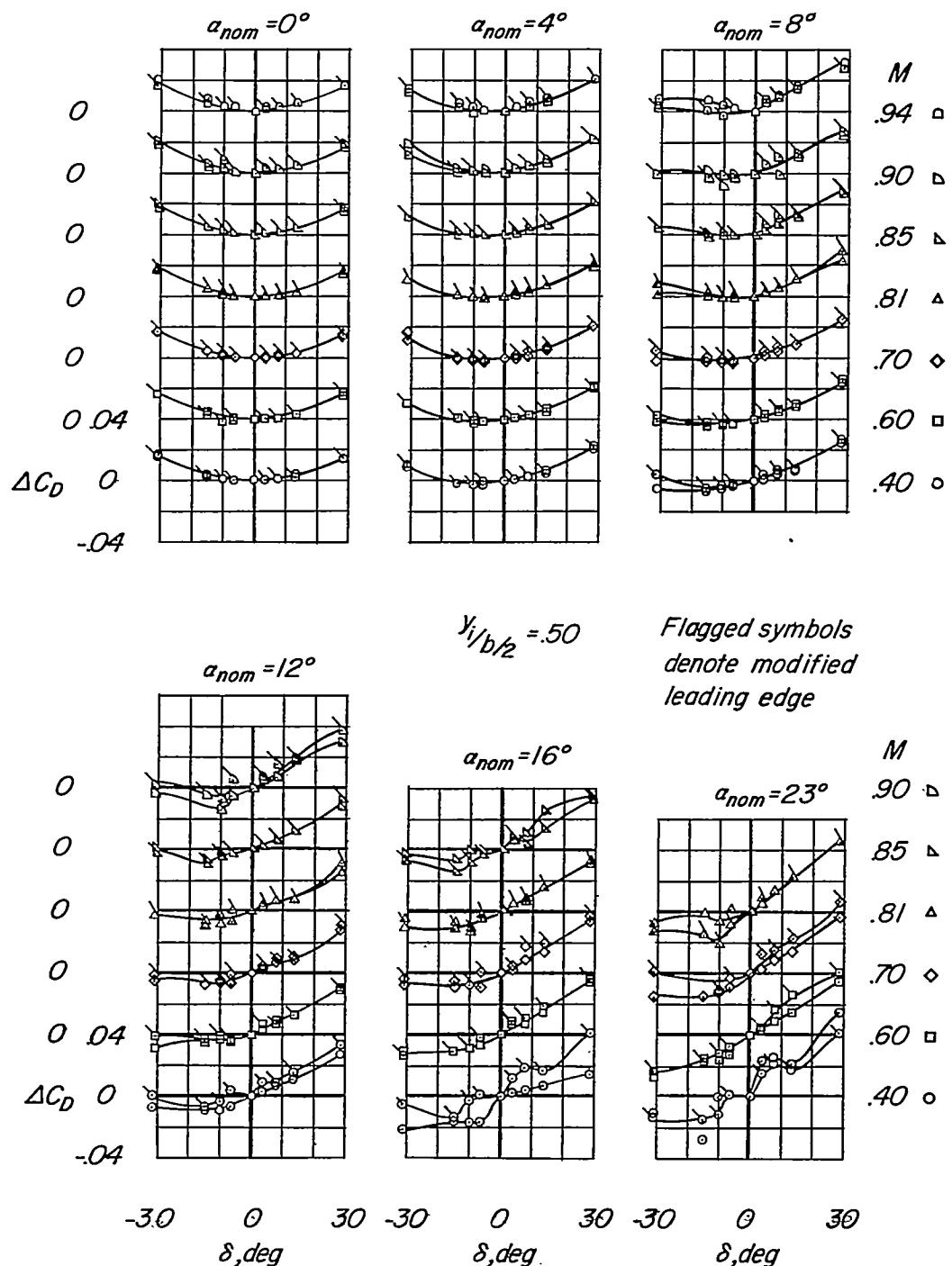
(b) Yawing-moment coefficient.

Figure 6.- Continued.



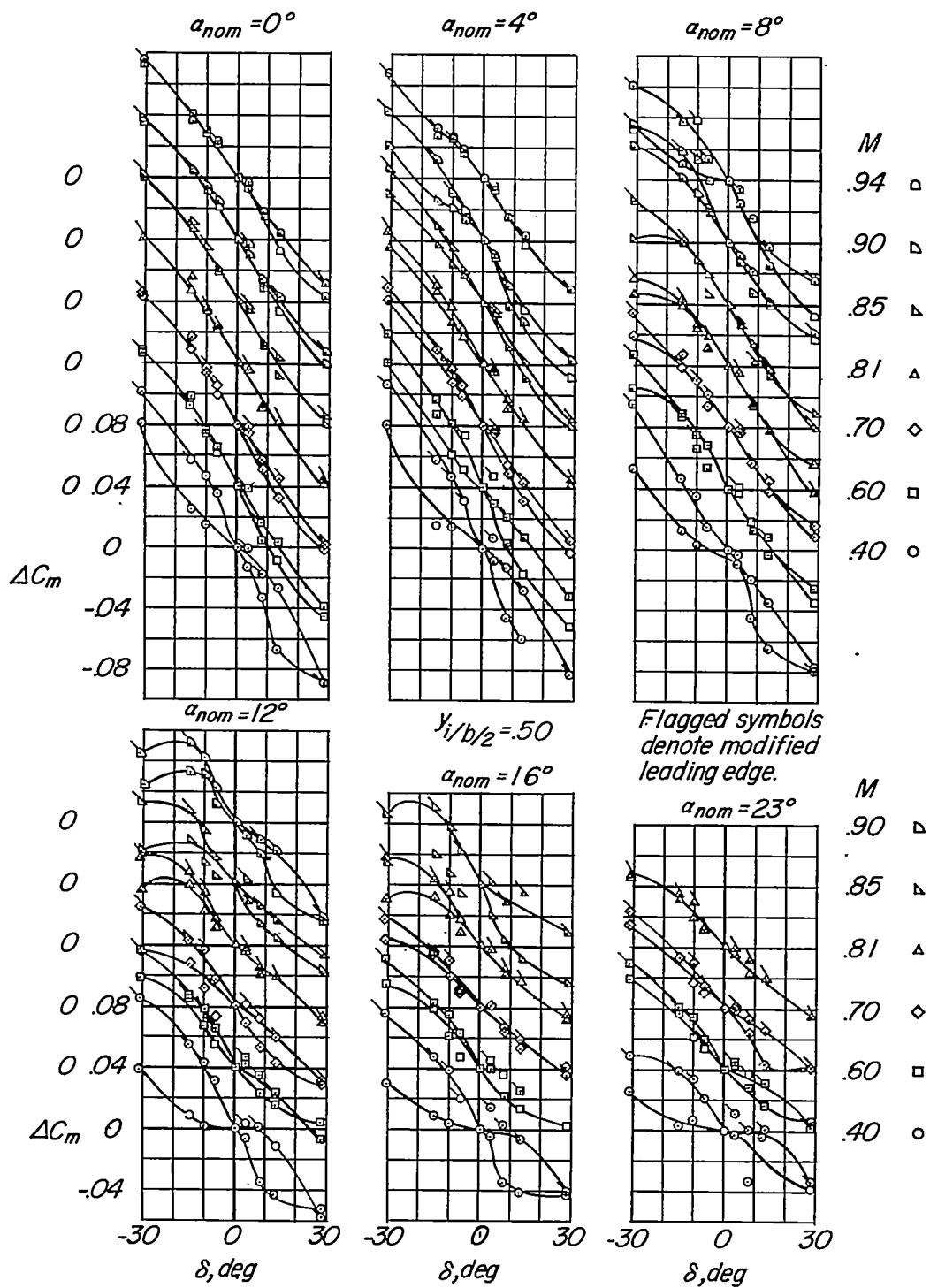
(c) Lift coefficient.

Figure 6.- Continued.



(d) Drag coefficient.

Figure 6.- Continued.



(e) Pitching-moment coefficient.

Figure 6.- Concluded.

$$M = .85$$

$$\delta = 30.6 \quad \Delta$$

$$\delta = -29.3 \quad \nabla$$

Flagged symbols denote  
modified leading edge.

$$y_i/b_{1/2} = 2.5$$

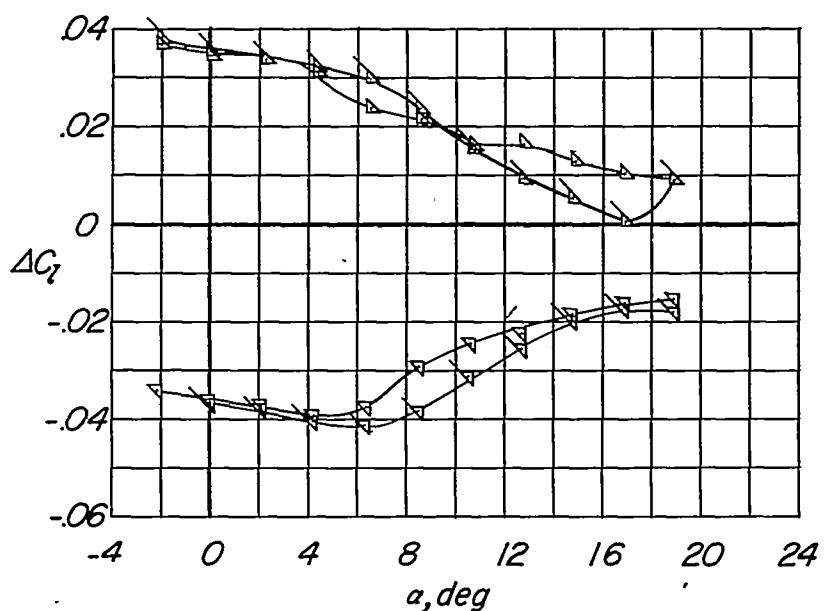
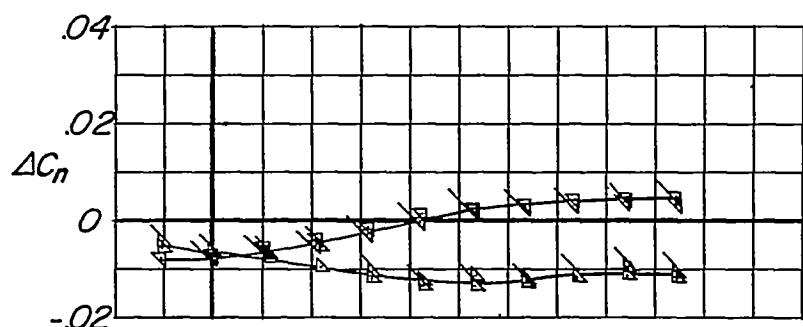


Figure 7.- Effect of wing leading-edge modification on the variation of incremental rolling-moment and yawing-moment coefficient with angle of attack for the inboard aileron.

$M=85$ 

$\delta = 28.2 \quad \Delta \quad$  Flagged symbols denote  
 $\delta = -31.3 \quad \nabla \quad$  modified leading edge.

$$y_i/b_{1/2} = .50$$

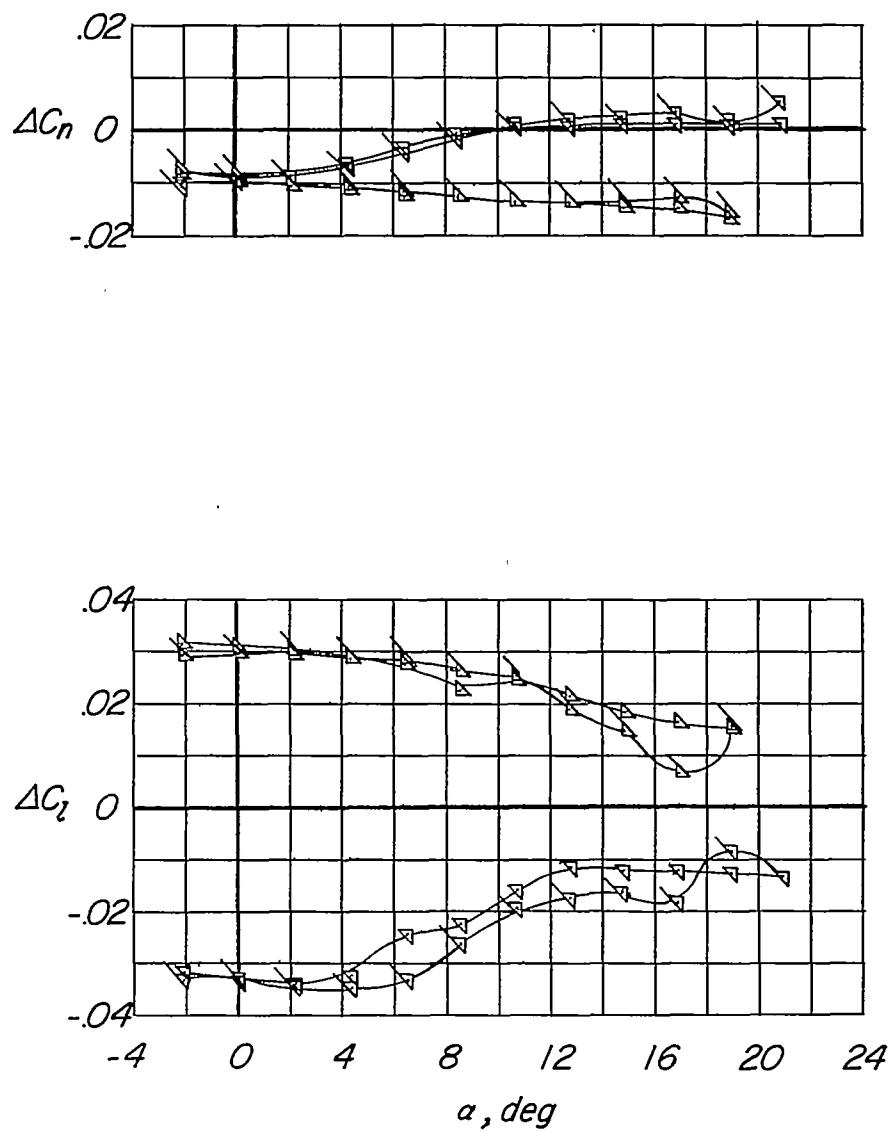
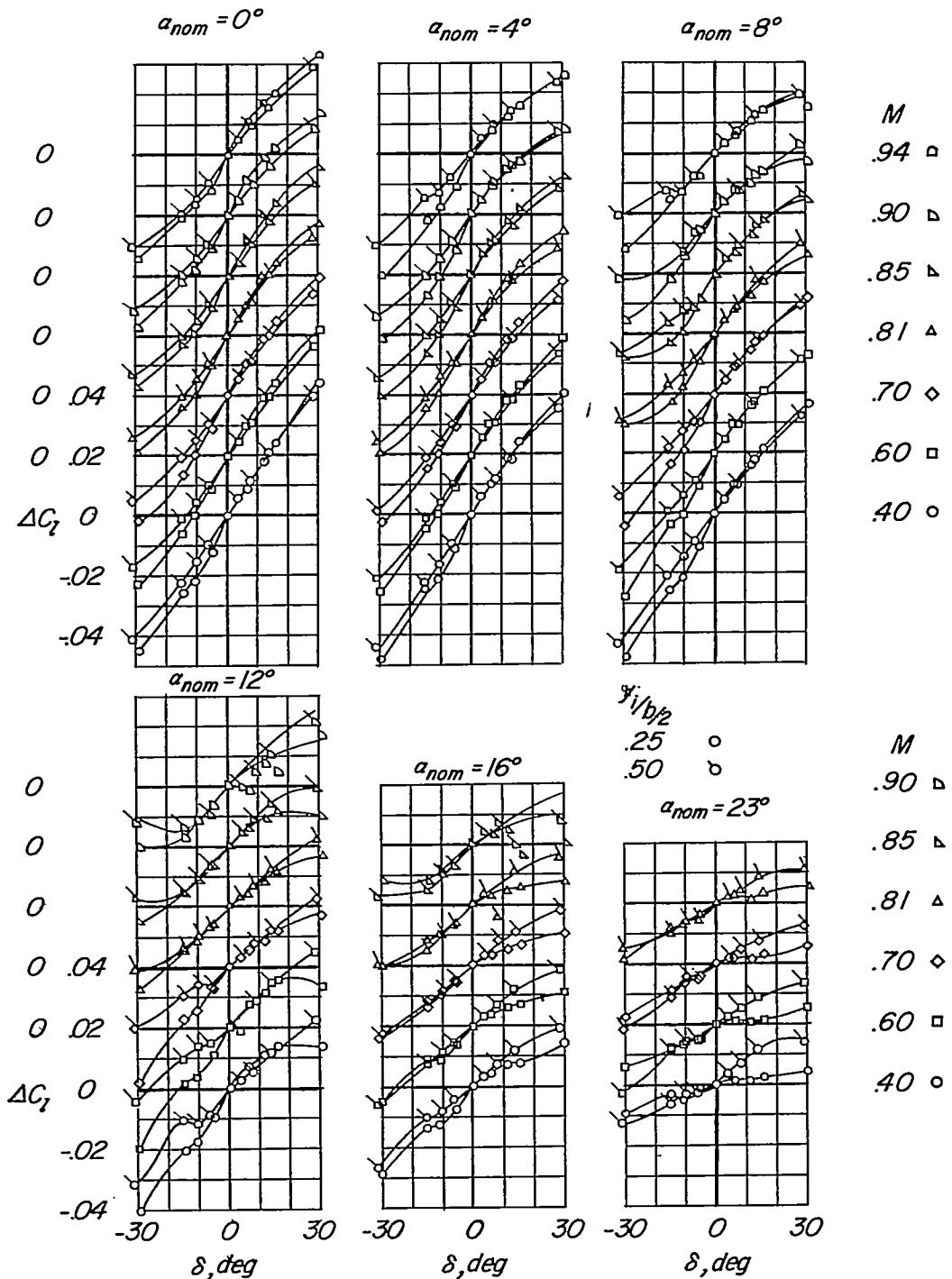
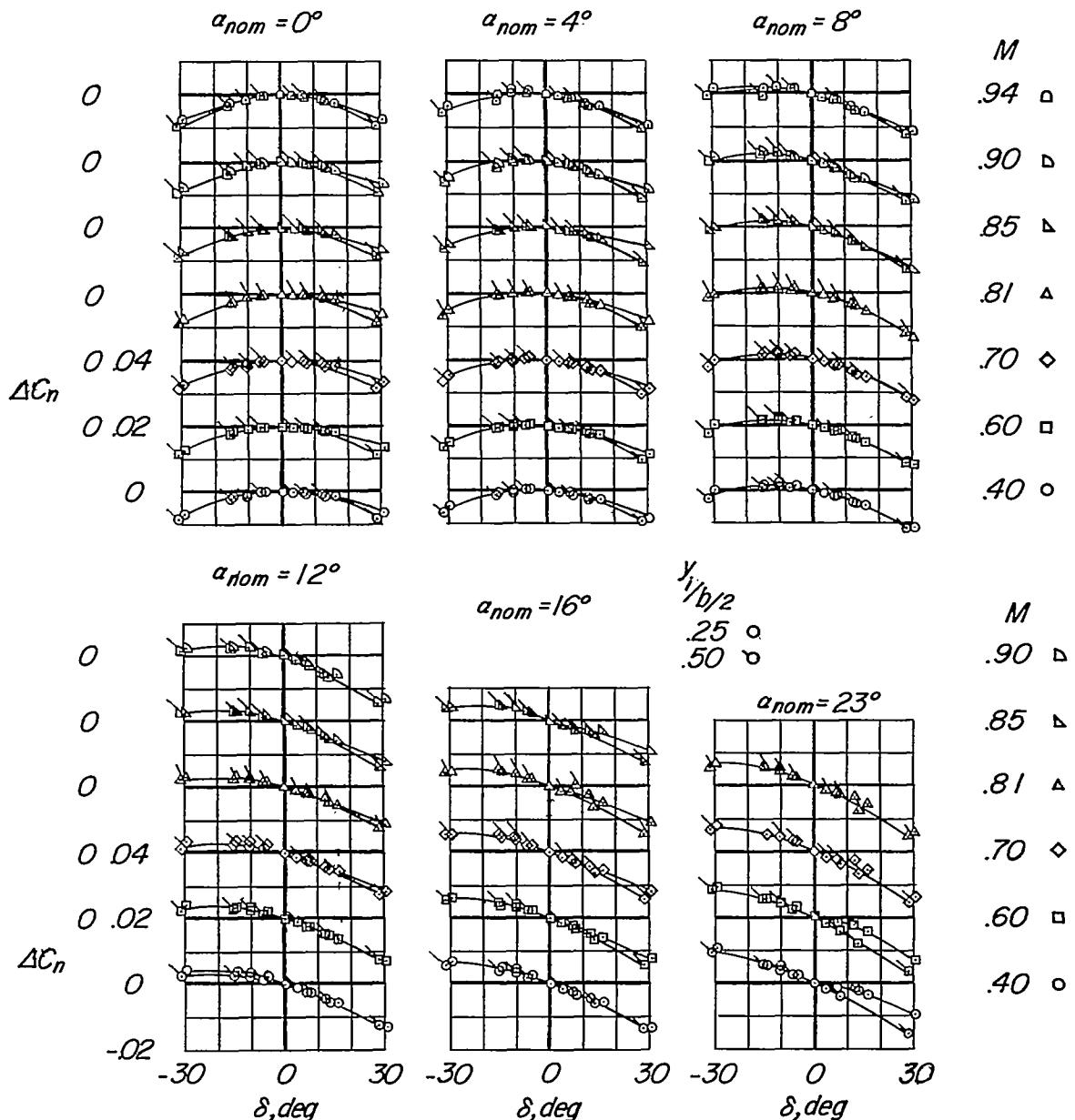


Figure 8.- Effect of wing leading-edge modification on the variation of incremental rolling-moment and yawing-moment coefficient with angle of attack for the outboard aileron.



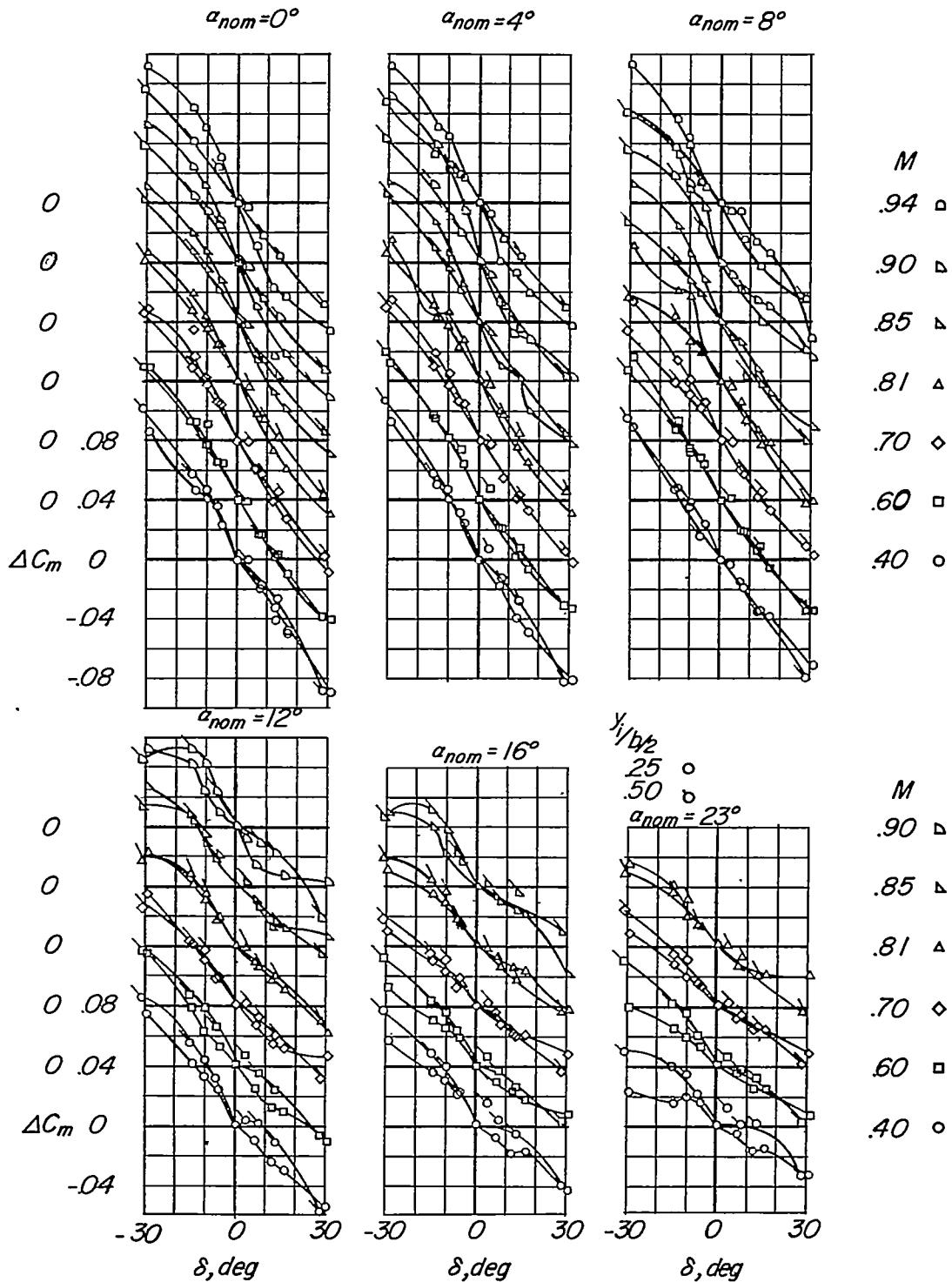
(a) Rolling-moment coefficient.

Figure 9.- Effect of aileron spanwise location on the variation of incremental aerodynamic moment coefficients with aileron deflection on the wing with the modified leading edge.



(b) Yawing-moment coefficient.

Figure 9.- Continued.



(c) Pitching-moment coefficient.

Figure 9.- Concluded.

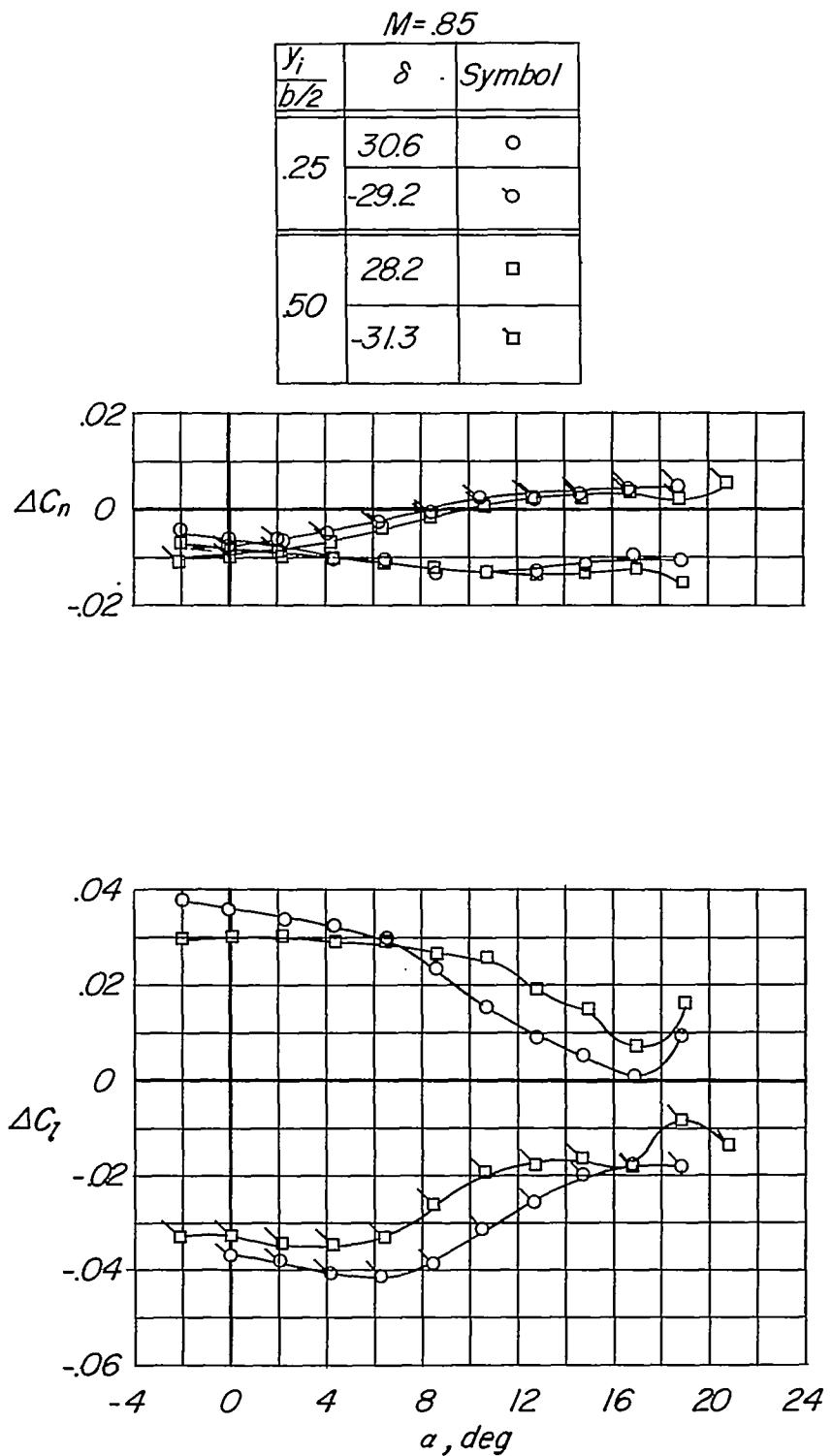


Figure 10.- Effect of aileron spanwise location on the variation of incremental rolling-moment and yawing-moment coefficients with angle of attack on the wing with the modified leading edge.